DENO-00384

# DENON

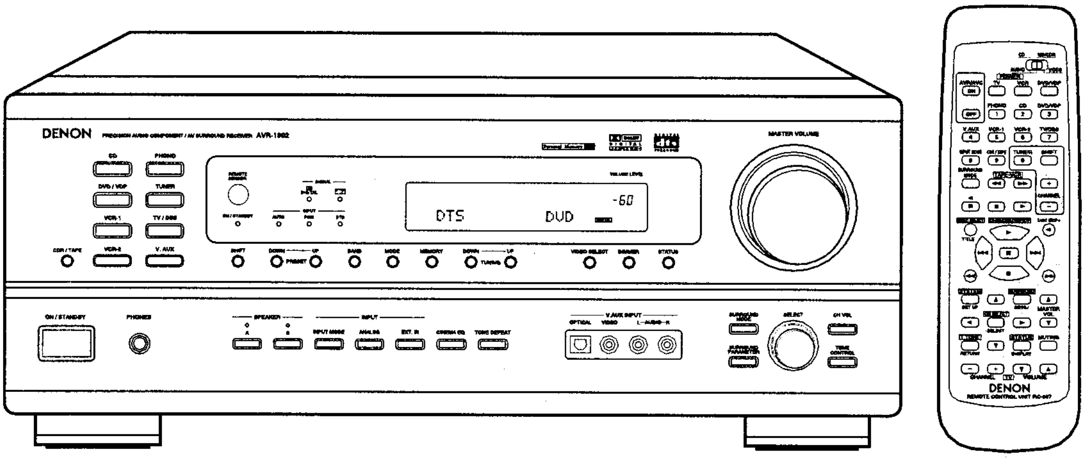
**For U.S.A., Canada, Europe, Asia, China, Hong Kong & Taiwan R.O.C. model**

Hi-Fi Component

# SERVICE MANUAL

# MODEL AVR-1802/882

## AV SURROUND RECEIVER



● Some illustrations using in this service manual are slightly different from the actual set.

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X0117 1174 NC 0109

# SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

## LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

# SPECIFICATIONS

## ■ Audio section

### Power amplifier

| | | | |
|---|---|---|---|
| **Rated output:** | Front: | 80W + 80W | (8Ω/ohms, 20Hz ~20kHz with 0.08% T.H.D) |
| | | 115W + 115W | (6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models) |
| | | 130W + 130W | (6Ω/ohms, EIAJ) (Asia Model) |
| | Center: | 80W | (8Ω/ohms, 20Hz ~20kHz with 0.08% T.H.D) |
| | | 115W | (6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models) |
| | | 130W | (6Ω/ohms, EIAJ) (Asia Model) |
| | Surround: | 80W + 80W | (8Ω/ohms, 20Hz ~20kHz with 0.08% T.H.D) |
| | | 115W + 115W | (6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models) |
| | | 130W + 130W | (6Ω/ohms, EIAJ) (Asia Model) |
| **Output terminals:** | Front: | A or B 6 to 16Ω/ohms | |
| | | A + B 12 to 16Ω/ohms | |
| | Center/Surround: | 6 to 16Ω/ohms | |

### Analog

| | |
|---|---|
| **LINE input - PRE OUT** | |
| **Input Sensitivity/input impedance:** | 200mV/47kΩ/kohms |
| **Frequency response:** | 10Hz~100kHz: + 1, -3dB (TONE DEFEAT ON) |
| **S/N ratio:** | 100dB (IHF-A weighted) (TONE DEFEAT ON) |

## ■ Video section

### Standard video jacks

| | |
|---|---|
| **Input/output level and impedance:** | 1Vp-p, 75Ω/ohms |
| **Frequency response:** | 5Hz~10MHz — +1, -3dB |

### S-video jacks

| | |
|---|---|
| **Input/output level and impedance:** | Y (brightness) signal — 1Vp-p, 75Ω/ohms<br>C (color) signal — 0.286Vp-p, 75Ω/ohms |
| **Frequency response:** | 5Hz~10MHz — +1, -3dB |

## ■ Tuner section

| **Receiving range:** | **[FM]** (note: µV at 75Ω/ohms, 0dBf =$1\text{x}10^{-15}$W) | | **[AM]** |
|---|---|---|---|
| U.S.A. & Canada Models | 87.50MHz~107.90MHz | | 520kHz~1710kHz |
| Europe & Asia (for China) Models | 87.50MHz~108.00MHz | | 522kHz~1611kHz |
| Asia (for Multiple voltage) Models | 87.50MHz~107.90MHz (0.2MHz steps)<br>87.50MHz~108.00MHz (0.05MHz steps) | | 520kHz~1710kHz (10kHz steps)<br>522kHz~1611kHz (9kHz steps) |
| **Usable sensitivity:** | 1.0 µV (11.2dBf) | | 18 µV |
| **50dB quieting sensitivity:** | MONO | 1.6 µV (15.3dBf) | |
| | STEREO | 23 µV (38.5dBf) | |
| **S/N ratio:** | MONO | 80dB (IHF-A weighted) | |
| | STEREO | 75dB (IHF-A weighted) | |
| **Total harmonic distortion:** | MONO | 0.15% (1kHz) | |
| | STEREO | 0.3% (1kHz) | |

## ■ General

| | |
|---|---|
| **Power supply:** | |
| U.S.A., Canada Models | AC120V, 60Hz |
| Europe Model | AC230V, 50Hz |
| Asia (for Multiple voltage) Model | AC115/230V, 50/60Hz |
| Asia (for China) Model | AC220V, 50Hz |
| **Power consumption:** | 4.5A (U.S.A. & Canada model), 230W (Europe & Asia model) |
| **Maximum external dimensions:** | 434 (W) x 171 (H) x 417 (D)mm (17-3/32" x 6-47/64" x 16-7/16") |
| **Mass:** | 10.9kg (24lbs 0.5 oz) |

## ■ Remote control unit (RC-897)

| | |
|---|---|
| **Batteries:** | R6P/AA Type(two batteries) |
| **External dimensions:** | 54 (W) x 172.5 (H) x 29 (D)mm (2-1/8" x 6-51/64" x 1-9/64") |
| **Mass:** | 120g (Approx. 4.2 oz) (including batteries) |

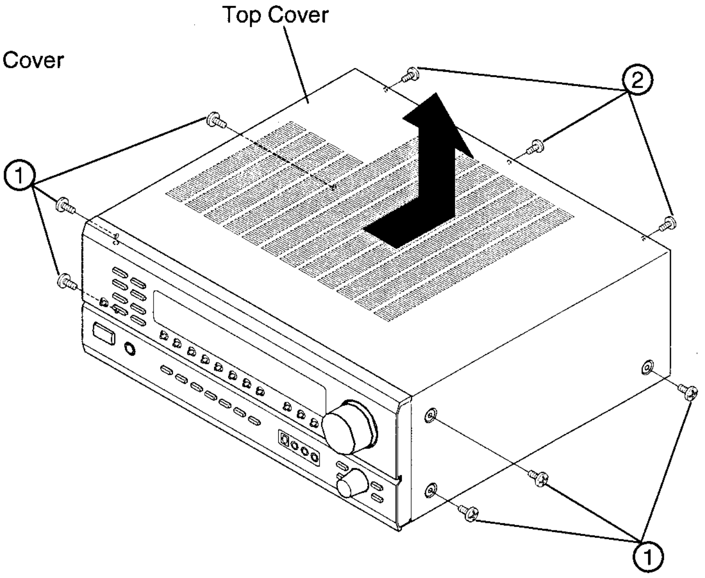
* For purposes of improvement, specifications and design are subject to change without notice.

# DISASSEMBLY

(To reassemble reverse disassenbly)

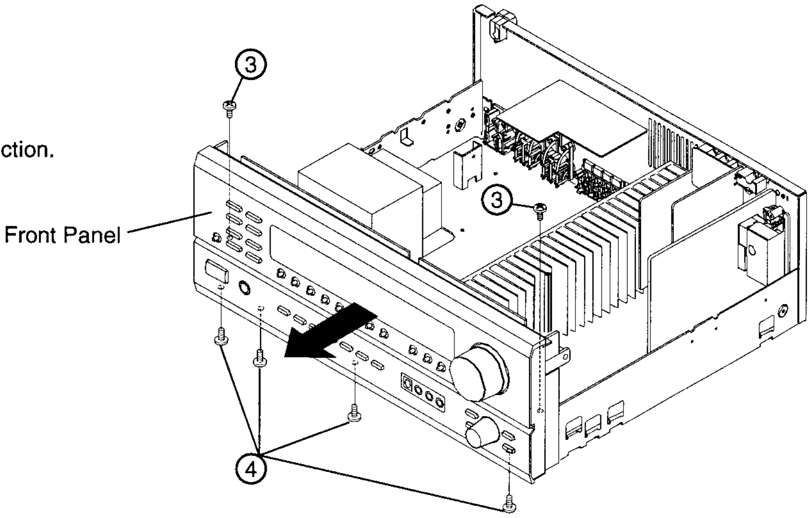
## Top Cover

Remove 6 screws ① and 3 screws ②, detach the Top Cover in the arrow direction.


Top Cover
②
①
①

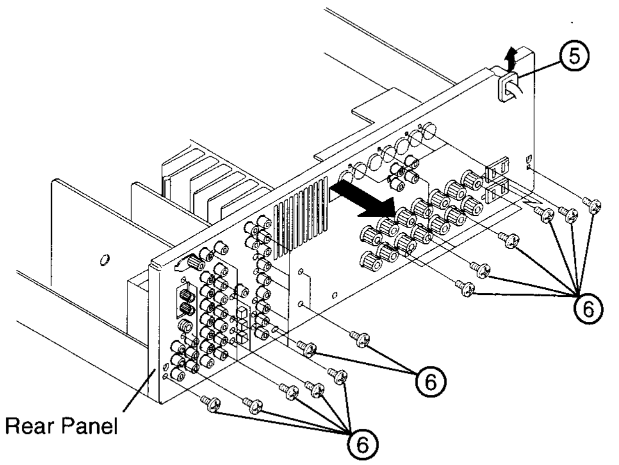
## Front Panel

1. Remove 2 screws ③.
2. Remove 4 screws ④.
3. Detach the Front Panel in the arrow direction.


③
③
Front Panel
④

## Rear Panel

1. Remove cord bushing ⑤ from the Rear Panel.
2. Remove 36 screw ⑥.
3. Detach the Rear Panel in the arrow direction.

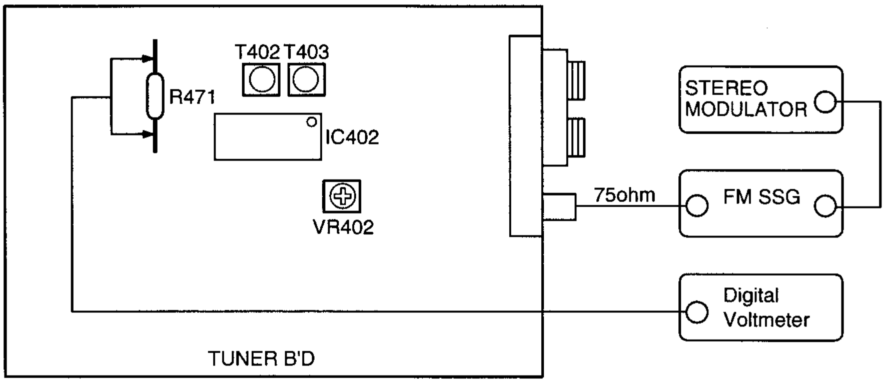

⑤
⑥
⑥
⑥
Rear Panel

# ADJUSTMENT

## Tuner Section

### CONNECTION DIAGRAM OF MEASURING INSTRUMENTS

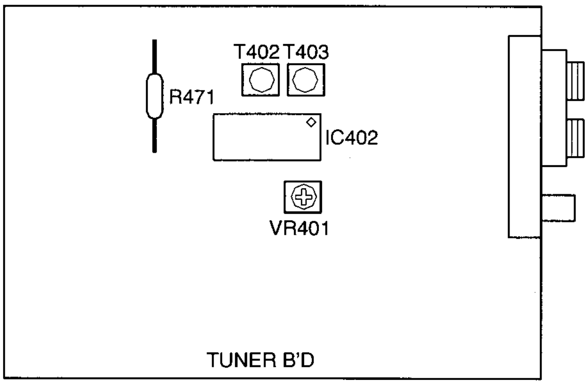
**● FM**


T402
T403
R471
IC402
VR402
STEREO MODULATOR
75ohm
FM SSG
Digital Voltmeter
TUNER B'D

### FM ALIGNMENT

| Step | Alignment Item | Tuning Frequency Setting | Input | | | | | Output | | Adjustment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type | Frequency | Input Level | Modulation | Coupling | Type | Connect to | Points | Adjust to |
| 1 | Center Adjustment | 98.1MHz (98.0MHz) | FM SSG | 98.1MHz | 60dBμ | — | Antenna Terminal | Digital Voltmeter | R471 | T402 | ± 50mV |
| 2 | Distortion | 98.1MHz (98.0MHz) | FM SSG | 98.1MHz | 60dBμ | Mono 1kHz 100% | Antenna Terminal | Distortion Meter | Output Terminal (L) | T403 | Minimum Distortion |
| 3 | Repeat Steps 1 and 2 | | | | | | | | | | |
| 4 | Signal Level | 98.1MHz (98.0MHz) | FM SSG | 98.1MHz | 20dBμ | OFF | Antenna Terminal | Light "TUNED" on FL Display | | VR402 | $20^{+14}_{-10}$dB |

**● AM**


T402
T403
R471
IC402
VR401
TUNER B'D

### AM ALIGNMENT

| Step | Alignment Item | Frequency | Input | Output | | Adjustment | | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | Type | Connect to | Points | Adjust to | |
| 1 | Signal Level | 999 (1000) kHz | AM SSG | — | — | VR401 | Light "TUNED" on FL Display | SSG OUTPUT 74dBμ (EMF) |

# Audio Section

## Idling Current

Required measurement equipment : DC Voltmeter

### Preparation

(1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room tempereture 15 °C ~ 30 °C (59 °F ~ 86 °F).

(2) Presetting

- ● POWER (Power sourse switch) → OFF
- ● SPEAKER (Speaker terminal) → No load (Do not connect speaker, dummy resistor, etc.)

### Adjustment

(1) Remove top cover and set VR101, VR102, VR103, VR104, VR105 on Amp. Unit at full counterclockwise ( ↺ ) position.

(2) Connect DC Voltmeter to test points (FRONT-Lch: TP104, FRONT-Rch: TP105, CENTER ch: TP103, SURROUND-Lch: TP101, SURROUND-Rch: TP102).

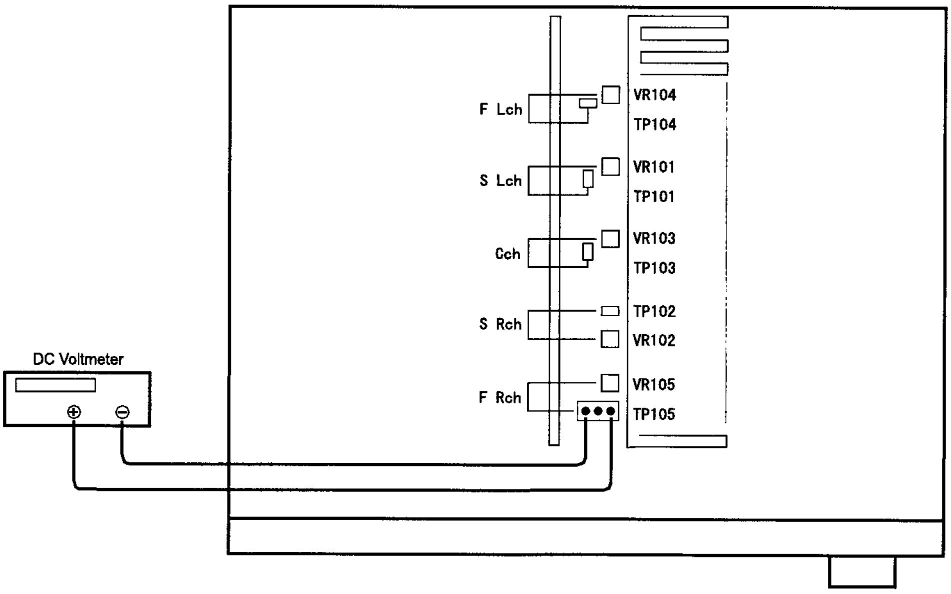
(3) Connect power cord to AC Line, and turn power switch "ON".

(4) Presetting.
MASTER VOLUME : "---" counterclockwise ( ↺ min.)
MODE : 5CH STEREO
FUNCTION : CD

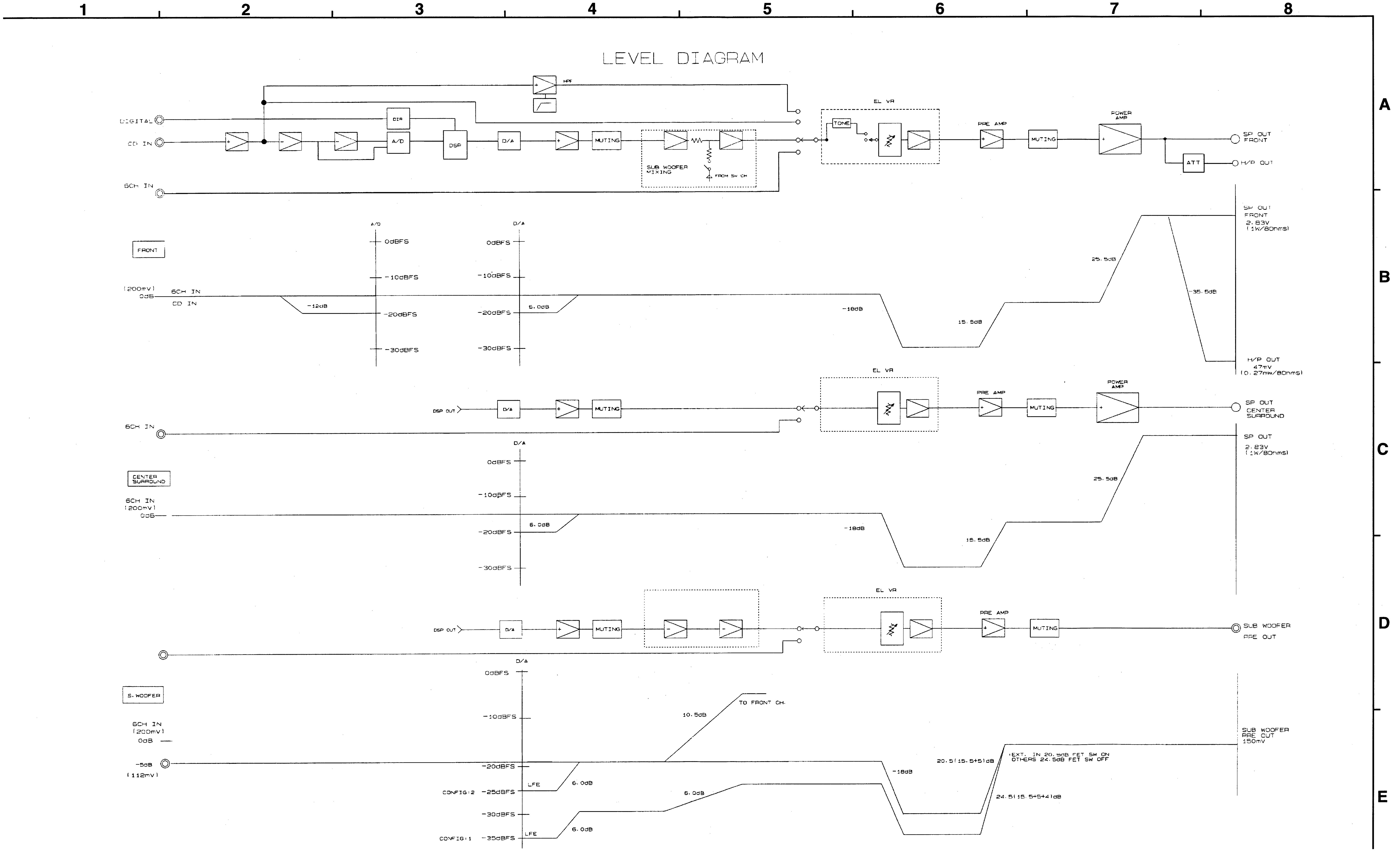
(5) Within 2 minutes after the power on, turn VR101 clockwise ( ↻ ) to adjust the TEST POINT voltage to 1.5 mV ±0.5 mV DC.

(6) After 10 minutes from the preset above, turn VR101 to set the voltage to 2.5 mV ±0.5 mV DC.

(7) Adjust the Variable Resistors of other channels in the same way.



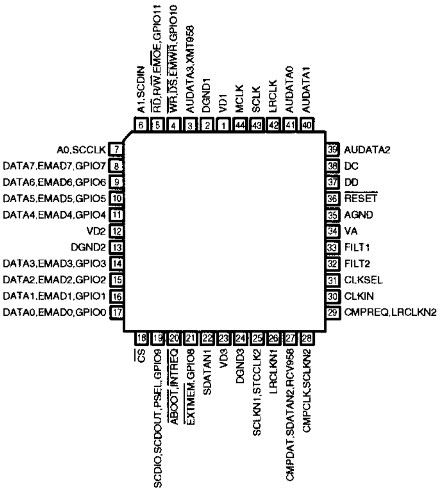
# LEVEL DIAGRAM


1
2
3
4
5
6
7
8
A
B
C
D
E
LEVEL DIAGRAM
HPF
DIGITAL
CD IN
6CH IN
DIR
A/D
DSP
D/A
MUTING
SUB WOOFER MIXING
FROM SW CH
EL VR
TONE
PRE AMP
MUTING
POWER AMP
ATT
SP OUT FRONT
H/P OUT
FRONT
A/D
D/A
0dBFS
-10dBFS
-20dBFS
-30dBFS
(200mV) 0dB
6CH IN
CD IN
-12dB
6.0dB
-18dB
15.5dB
25.5dB
-35.5dB
SP OUT FRONT 2.83V (1W/8Ohms)
H/P OUT 47mV (0.27mW/8Ohms)
DSP OUT
6CH IN
EL VR
PRE AMP
MUTING
POWER AMP
SP OUT CENTER SURROUND
CENTER SURROUND
6CH IN (200mV) 0dB
D/A
0dBFS
-10dBFS
-20dBFS
-30dBFS
6.0dB
-18dB
15.5dB
25.5dB
SP OUT 2.83V (1W/8Ohms)
DSP OUT
D/A
MUTING
EL VR
PRE AMP
MUTING
SUB WOOFER PRE OUT
S.WOOFER
6CH IN (200mV) 0dB
-5dB (112mV)
D/A
0dBFS
-10dBFS
-20dBFS
CONFIG:2 -25dBFS
-30dBFS
CONFIG:1 -35dBFS
LFE
6.0dB
LFE
6.0dB
10.5dB
TO FRONT CH.
6.0dB
-18dB
20.5(15.5+5)dB
(EXT. IN 20.5dB FET SW ON OTHERS 24.5dB FET SW OFF
24.5(15.5+5+4)dB
SUB WOOFER PRE OUT 150mV

# SEMICONDUCTORS

## ● ICs

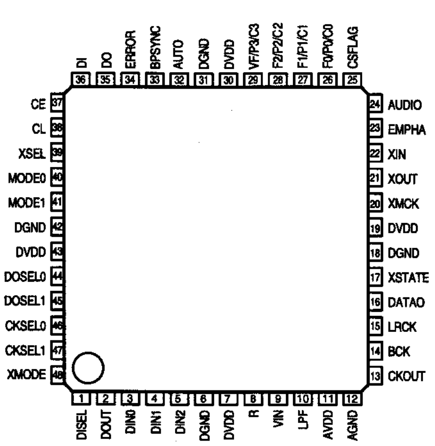
### CS493263-CL
### (AU: IC812)


A1,SCDIN
$\overline{\mathrm{RD}}$,R/$\overline{\mathrm{W}}$,$\overline{\mathrm{EMOE}}$,GPIO11
$\overline{\mathrm{WR}}$,$\overline{\mathrm{DS}}$,$\overline{\mathrm{EMWR}}$,GPIO10
AUDATA3,XMT958
DGND1
VD1
MCLK
SCLK
LRCLK
AUDATA0
AUDATA1
6
5
4
3
2
1
44
43
42
41
40
A0,SCCLK 7
DATA7,EMAD7,GPIO7 8
DATA6,EMAD6,GPIO6 9
DATA5,EMAD5,GPIO5 10
DATA4,EMAD4,GPIO4 11
VD2 12
DGND2 13
DATA3,EMAD3,GPIO3 14
DATA2,EMAD2,GPIO2 15
DATA1,EMAD1,GPIO1 16
DATA0,EMAD0,GPIO0 17
39 AUDATA2
38 DC
37 DD
36 $\overline{\mathrm{RESET}}$
35 AGND
34 VA
33 FILT1
32 FILT2
31 CLKSEL
30 CLKIN
29 CMPREQ,LRCLKN2
18
19
20
21
22
23
24
25
26
27
28
$\overline{\mathrm{CS}}$
SCDIO,SCDOUT,PSEL,GPIO9
$\overline{\mathrm{ABOOT}}$,$\overline{\mathrm{INTREQ}}$
$\overline{\mathrm{EXTMEM}}$,GPIO8
SDATAN1
VD3
DGND3
SCLKN1,STCCLK2
LRCLKN1
CMPDAT,SDATAN2,RCV958
CMPCLK,SCLKN2

## CS493263-CL Terminal Function

| Pin No. | Pin Name | Function |
|---|---|---|
| 1 | VD1 | Digital positive supply |
| 2 | DGND1 | Digital supply ground |
| 3 | AUDATA3, XMT958 | SPDIF transmitter output, Digital audio output 3 |
| 4 | $\overline{\mathrm{WR}}$, $\overline{\mathrm{DS}}$, $\overline{\mathrm{EMWR}}$, GPIO10 | Host write strobe or host data strobe or external memory write enable or general purpose input & output number 10 |
| 5 | $\overline{\mathrm{RD}}$, R/$\overline{\mathrm{W}}$, $\overline{\mathrm{EMOE}}$, GPIO11 | Host parallel output enable or host parallel R/$\overline{\mathrm{W}}$ or external memory output enable or general purpose input & output number11 |
| 6 | A1, SCDIN | Host address bit one or SPI serial control data input |
| 7 | A0, SCCLK | Host parallel address bit zero or serial control port clock |
| 8 | DATA7, EMAD7, GPIO7 | |
| 9 | DATA6, EMAD6, GPIO6 | |
| 10 | DATA5, EMAD5, GPIO5 | |
| 11 | DATA4, EMAD4, GPIO4 | |
| 12 | VD2 | Digital positive supply |
| 13 | DGND2 | Digital supply ground |
| 14 | DATA3, EMAD3, GPIO3 | |
| 15 | DATA2, EMAD2, GPIO2 | |
| 16 | DATA1, EMAD1, GPIO1 | |
| 17 | DATA0, EMAD0, GPIO0 | |
| 18 | $\overline{\mathrm{CS}}$ | Host parallel chip select, host serial SPI chip select |
| 19 | SCDIO, SCDOUT, PSEL, GPIO9 | Serial control port data input and output, parallel port type select |
| 20 | $\overline{\mathrm{INTREQ}}$, $\overline{\mathrm{ABOOT}}$ | Control port interrupt request, automatic boot enable |
| 21 | $\overline{\mathrm{EXTMEM}}$, GPIO8 | External memory chip select or general purpose input & output number 8 |
| 22 | SDATAN1 | PCM audio data input number one |
| 23 | VD3 | Digital positive supply |
| 24 | DGND3 | Digital supply ground |
| 25 | SCLKN1, STCCLK2 | PCM audio input bit clock |
| 26 | LRCLKN1 | PCM audio input sample rate clock |
| 27 | CMPDAT, SDATAN2, RCV958 | PCM audio data input number two |
| 28 | CMPCLK, SCLKN2 | PCM audio input bit clock |
| 29 | CMPREQ, LRCLKN2 | PCM audio input sample rate clock |
| 30 | CLKIN | Master clock input |
| 31 | CLKSEL | DSP clock select |
| 32 | FILT2 | Phase locked loop filter |
| 33 | FILT1 | Phase locked loop filter |
| 34 | VA | Analog positive supply |
| 35 | AGND | Analog supply ground |
| 36 | $\overline{\mathrm{RESET}}$ | Master reset input |
| 37 | DD | Reserved |
| 38 | DC | Reserved |
| 39 | AUDATA2 | Digital audio output 2 |
| 40 | AUDATA1 | Digital audio output 1 |
| 41 | AUDATA0 | Digital audio output 0 |
| 42 | LRCLK | Audio output sample rate clock |
| 43 | SCLK | Audio output bit clock |
| 44 | MCLK | Audio master clock |

## LC89055W (IC810)

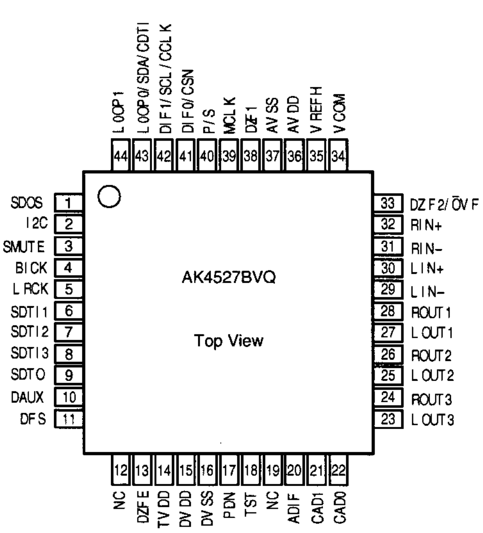

DI 36
DO 35
ERROR 34
BPSYNC 33
AUTO 32
DGND 31
DVDD 30
VF/P3/C3 29
F2/P2/C2 28
F1/P1/C1 27
F0/P0/C0 26
CSFLAG 25
CE 37
CL 38
XSEL 39
MODE0 40
MODE1 41
DGND 42
DVDD 43
DOSEL0 44
DOSEL1 45
CKSEL0 46
CKSEL1 47
XMODE 48
24 AUDIO
23 EMPHA
22 XIN
21 XOUT
20 XMCK
19 DVDD
18 DGND
17 XSTATE
16 DATAO
15 LRCK
14 BCK
13 CKOUT
1 DISEL
2 DOUT
3 DIN0
4 DIN1
5 DIN2
6 DGND
7 DVDD
8 R
9 VIN
10 LPF
11 AVDD
12 AGND

## LC89055W Terminal Function

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 1 | DISEL | I | Data input terminal (select input pin of DIN0, DIN1) |
| 2 | DOUT | O | Input bi-phase data through output terminal |
| 3 | DIN0 | I | Amp built-in coaxial/optical input correspond data input terminal |
| 4 | DIN1 | I | Amp built-in coaxial/optical input correspond data input terminal |
| 5 | DIN2 | I | Optical input correspond data input terminal |
| 6 | DGND |  | Digital GND |
| 7 | DVDD |  | Digital power supply |
| 8 | R | I | VCO gain control input terminal |
| 9 | VIN | I | VCO free-run frequency setting input terminal |
| 10 | LPF | O | PLL loop filter setting terminal |
| 11 | AVDD |  | Analog power supply |
| 12 | AGND |  | Analog GND |
| 13 | CKOUT | O | Clock output terminal (256fs, 384fs, 512fs, X'tal osc., VCO free-run osc.) |
| 14 | BCK | O | 64fs clock output terminal |
| 15 | LRCK | O | fs clock output terminal (L: Rch, H: Lch, I²S: Reverse) |
| 16 | DATAO | O | Data output terminal |
| 17 | XSTATE | O | Input data detecting result output terminal |
| 18 | DGND |  | Digital GND |
| 19 | DVDD |  | Digital power supply |
| 20 | XMCK | O | X'tal osc. clock output terminal (24.576MHz or 12.288MHz) |
| 21 | XOUT | O | X'tal osc. connection output terminal |
| 22 | XIN | I | X'tal osc. connection input terminal, external signal input possible (24.576MHz or 12.288MHz) |
| 23 | EMPHA | O | Emphasis information output terminal of channel status |
| 24 | AUDIO | O | Bit1 output terminal of channel status |
| 25 | CSFLAG | O | Top 40bit revise flag output terminal of channel status |
| 26 | F0/P0/C0 | O | Input fs cal. sig. out/data type out/input word inf. output terminal |
| 27 | F1/P1/C1 | O | Input fs cal. sig. out/data type out/input word inf. output terminal |
| 28 | F2/P2/C2 | O | Input fs cal. sig. out/data type out/input word inf. output terminal |
| 29 | VF/P3/C3 | O | Validity flag out/data type out/input word inf. output terminal |
| 30 | DVDD |  | Digital power supply |
| 31 | DGND |  | Digital GND |
| 32 | AUTO | O | Non PCM burst data transfer detect sig. output terminal |
| 33 | BPSYNC | O | Non PCM burst data preamble Pa, Pb, Pc, Pd sync sig. output terminal |
| 34 | ERROR | O | PLL lock error, data error flag output terminal |
| 35 | DO | O | CPU/IFD read data output terminal |
| 36 | DI | I | CPU I/F write data input terminal |
| 37 | CE | I | CPU I/F chip enable input terminal |
| 38 | CL | I | CPU I/F chip enable input terminal |
| 39 | XSEL | I | Frequency select input pin of XIN X'tal osc. (24.576MHz or 12.288MHz) |
| 40 | MODE0 | I | Mode setting input terminal |
| 41 | MODE1 | I | Mode setting input terminal |
| 42 | DGND |  | Digital GND |
| 43 | DVDD |  | Digital power supply |
| 44 | DOSEL0 | I | Data output format select input terminal |
| 45 | DOSEL1 | I | Data output format select input terminal |
| 46 | CKSEL0 | I | Output clock select input terminal |
| 47 | CKSEL1 | I | Output clock select input terminal |
| 48 | XMODE | I | Reset input terminal |

- For latch-up countermeasure, set digital (DVDD) and analog (AVDD) power on/off in the same timing.

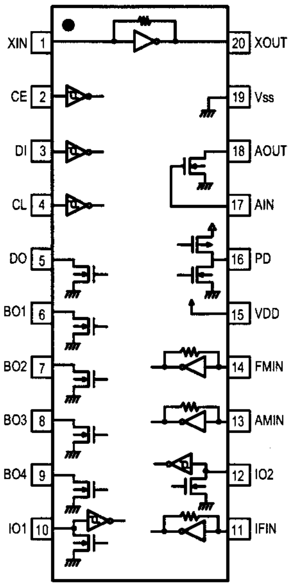
## AK4527BVQ (IC813)


LOOP1
LOOP0/SDA/CDTI
DIF1/SCL/CCLK
DIF0/CSN
P/S
MCLK
DZF1
AVSS
AVDD
VREFH
VCOM
44
43
42
41
40
39
38
37
36
35
34
SDOS 1
I2C 2
SMUTE 3
BICK 4
LRCK 5
SDTI1 6
SDTI2 7
SDTI3 8
SDTO 9
DAUX 10
DFS 11
AK4527BVQ
Top View
33 DZF2/OVF
32 RIN+
31 RIN-
30 LIN+
29 LIN-
28 ROUT1
27 LOUT1
26 ROUT2
25 LOUT2
24 ROUT3
23 LOUT3
12
13
14
15
16
17
18
19
20
21
22
NC
DZFE
TVDD
DVDD
DVSS
PDN
TST
NC
ADIF
CAD1
CAD0

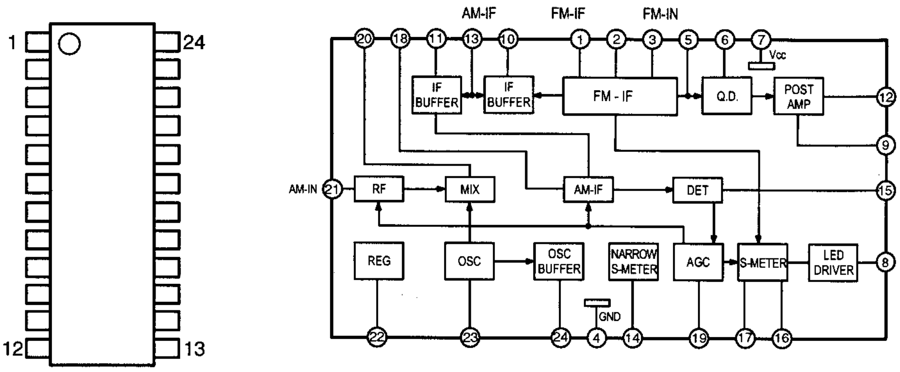
## AK4527BVQ Terminal Function

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 1 | SDOS | I | SDTO source select pin, L: Internal ADC output, H: DAUX input |
| 2 | I2C | I | Serial control mode select pin, L: 3-core serial, H: I$^2$C bus |
| 3 | SMUTE | I | Soft mute pin, H: Soft mute start, L: Release |
| 4 | BICK | I | Audio serial data clock pin |
| 5 | LRCK | I | Input channel clock pin |
| 6 | SDTI1 | I | DAC1 audio serial data input pin |
| 7 | SDTI2 | I | DAC2 audio serial data input pin |
| 8 | SDTI3 | I | DAC3 audio serial data input pin |
| 9 | SDTO | O | Audio serial data output pin |
| 10 | DAUX | I | Auxiliary audio serial data input pin |
| 11 | DFS | I | Double speed sampling mode pin, L: Normal, H: Double |
| 12 | NC | — | No Connect, No internal bonding |
| 13 | DZFE | I | Zero input detect enable pin |
| 14 | TVDD | — | Power pin for output buffer, 2.7V~5.5V |
| 15 | DVDD | — | Digital power pin, 4.5V~5.5V |
| 16 | DVss | — | Digital GND pin, 0V |
| 17 | PDN | I | Power down & reset pin, L: Powered-down and register initialized, Reset with PDN when switching CAD0-1 |
| 18 | TST | I | Test pin, connected to DVSS |
| 19 | NC | — | No Connect, No internal bonding |
| 20 | ADIF | I | Analog Input Format Select pin |
| 21 | CAD1 | I | Chip address-1 pin |
| 22 | CAD0 | I | Chip address-0 pin |
| 23 | LOUT3 | O | DAC3L channel analog out pin |
| 24 | ROUT3 | O | DAC3R channel analog out pin |
| 25 | LOUT2 | O | DAC2L channel analog out pin |
| 26 | ROUT2 | O | DAC2R channel analog out pin |
| 27 | LOUT1 | O | DAC1L channel analog out pin |
| 28 | ROUT1 | O | DAC1R channel analog out pin |
| 29 | LIN- | I | L-ch analog inverted input pin |
| 30 | LIN+ | I | L-ch analog non-inverted input pin |
| 31 | RIN- | I | R-ch analog inverted input pin |
| 32 | RIN+ | I | R-ch analog non-inverted input pin |
| 33 | DZF2/OVF | O | 0 input detect 2 pin/Analog input overflow detect pin |
| 34 | VCOM | O | Common V-out pin, AVDD/2, connect large capacitor to avoid noise |
| 35 | VREFH | I | Ref. V input pin, AVDD |
| 36 | AVDD | — | Analog GND pin, 4.5V~5.5V |
| 37 | AVss | — | Analog GND pin, 0V |
| 38 | DZF1 | O | 0 input detect pin, H: Input data of G1 is 8192 times "0" in a raw or RSTN bit "0", L: When P/S= "0" |
| 39 | MCLK | I | Master clock input pin |
| 40 | P/S | I | Parallel/Serial select pin, L: Serial control |
| 41 | DIF0 | I | Audio data I/F format 0 pin (parallel control) |
|  | CSN | I | Chip select pin (3-wire serial control), connect to DVDD when I$^2$C bus control |
| 42 | DIFI | I | Audio data I/F format 1 pin (parallel control) |
|  | SCL/CCLK | I | Control data clock pin (serial control), I$^2$C="L": CCLK (3-wire serial), I$^2$C="H": SCL (I$^2$C bus) |
| 43 | LOOP0 | I | Loop back mode 0 pin (parallel control), effects digital loop back ADC to all DAC |
|  | SDA/CDTI | I/O | Control data input pin (serial control), I$^2$C="L": CCTI (3-wire serial), I2C="H" SDA (I$^2$C bus) |
| 44 | LOOP1 | I | Loop back mode 1 pin, from SDT1 to all DAC |

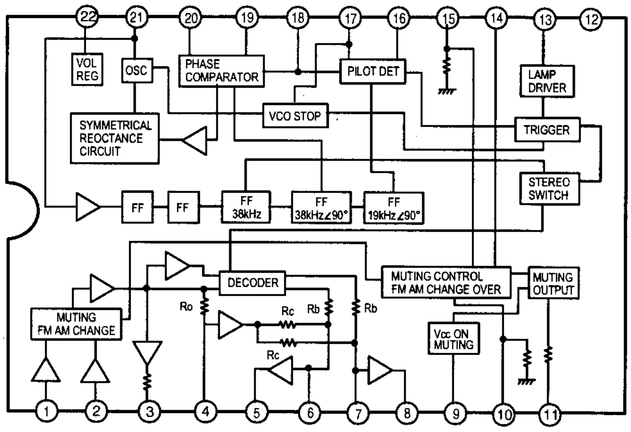
## LC72131 (IC401)


XIN 1
CE 2
DI 3
CL 4
DO 5
BO1 6
BO2 7
BO3 8
BO4 9
IO1 10
20 XOUT
19 Vss
18 AOUT
17 AIN
16 PD
15 VDD
14 FMIN
13 AMIN
12 IO2
11 IFIN

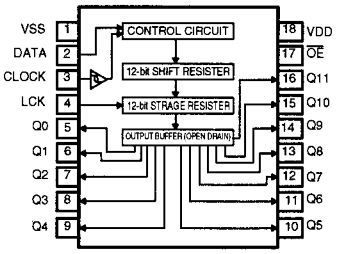
## LA1266 (IC402)


1
24
12
13
AM-IF
FM-IF
FM-IN
Vcc
IF BUFFER
IF BUFFER
FM - IF
Q.D.
POST AMP
AM-IN
RF
MIX
AM-IF
DET
REG
OSC
OSC BUFFER
NARROW S-METER
AGC
S-METER
LED DRIVER
GND

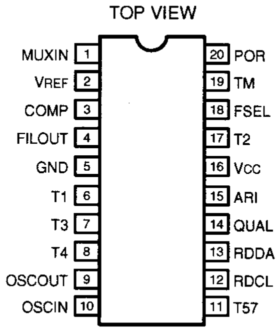
## LA3401 (IC403)


VOL REG
OSC
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
VCO STOP
SYMMETRICAL REOCTANCE CIRCUIT
TRIGGER
STEREO SWITCH
FF
FF
FF 38kHz
FF 38kHz∠90°
FF 19kHz∠90°
DECODER
MUTING CONTROL FM AM CHANGE OVER
MUTING OUTPUT
MUTING FM AM CHANGE
Ro
Rc
Rb
Rb
Rc
Vcc ON MUTING

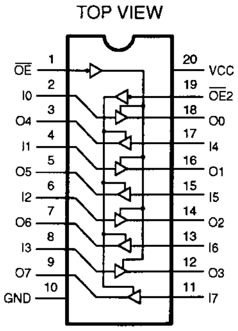
## BU2090F (IC302, 602)


VSS 1
DATA 2
CLOCK 3
LCK 4
Q0 5
Q1 6
Q2 7
Q3 8
Q4 9
18 VDD
17 OE
16 Q11
15 Q10
14 Q9
13 Q8
12 Q7
11 Q6
10 Q5
CONTROL CIRCUIT
12-bit SHIFT RESISTER
12-bit STRAGE RESISTER
OUTPUT BUFFER (OPEN DRAIN)

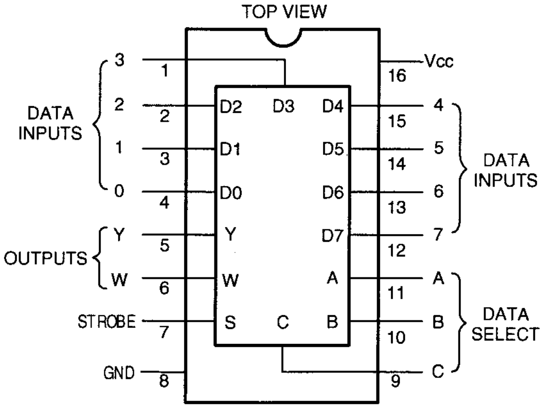
## TDA7330BD (IC202)


TOP VIEW
MUXIN 1
VREF 2
COMP 3
FILOUT 4
GND 5
T1 6
T3 7
T4 8
OSCOUT 9
OSCIN 10
20 POR
19 TM
18 FSEL
17 T2
16 Vcc
15 ARI
14 QUAL
13 RDDA
12 RDCL
11 T57

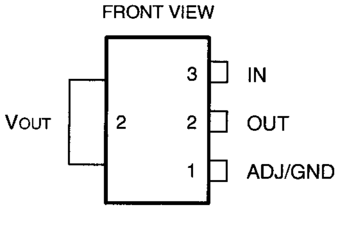
## MM74LCX244 (IC818,819)


TOP VIEW
OE 1
I0 2
O4 3
I1 4
O5 5
I2 6
O6 7
I3 8
O7 9
GND 10
20 VCC
19 OE2
18 O0
17 I4
16 O1
15 I5
14 O2
13 I6
12 O3
11 I7

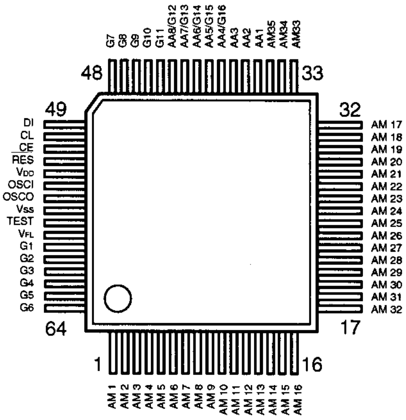
## MM74HC151 (IC832)


TOP VIEW
DATA INPUTS
3
2
1
0
OUTPUTS
Y
W
STROBE
GND
1
2
3
4
5
6
7
8
D2
D3
D4
D1
D5
D0
D6
Y
D7
W
A
S
C
B
16
15
14
13
12
11
10
9
Vcc
4
5
6
7
A
B
C
DATA INPUTS
DATA SELECT

## RC1117S25T (IC820)
## RC1117S33ST (IC811)


FRONT VIEW
VOUT
2
3
IN
2
OUT
1
ADJ/GND

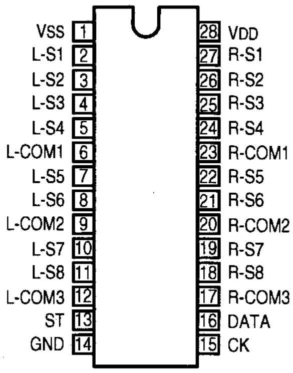
## LC75721E (IC301)


G7
G8
G9
G10
G11
AA8/G12
AA7/G13
AA6/G14
AA5/G15
AA4/G16
AA3
AA2
AA1
AM35
AM34
AM33
48
33
49
32
DI
CL
CE
RES
$V_{DD}$
OSCI
OSCO
$V_{SS}$
TEST
$V_{FL}$
G1
G2
G3
G4
G5
G6
64
17
AM 17
AM 18
AM 19
AM 20
AM 21
AM 22
AM 23
AM 24
AM 25
AM 26
AM 27
AM 28
AM 29
AM 30
AM 31
AM 32
1
16
AM 1
AM 2
AM 3
AM 4
AM 5
AM 6
AM 7
AM 8
AM 9
AM 10
AM 11
AM 12
AM 13
AM 14
AM 15
AM 16

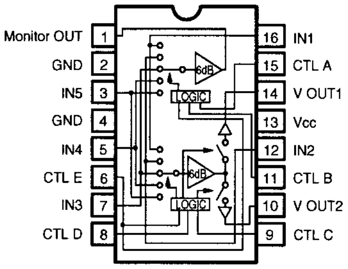
## LC75721E Terminal Function

| Symbol | Function |
|---|---|
| $V_{DD}$ | Power terminal +5V |
| $V_{SS}$ | Power terminal GND |
| $V_{FL}$ | Power terminal FL drive |
| DI<br>CL<br>CE | Serial data transfer terminal<br>DI: Data<br>CL: Clock<br>CE: Chip enable |
| OSCI<br>OSCO | External CR connecting terminal |
| $\overline{\text{RES}}$ | System reset terminal |
| AM1~AM35<br>AA1~AA3 | Anode output terminal |
| AA4/G16<br>AA5/G15<br>AA6/G14<br>AA7/G13<br>AA8/G12 | Anode/Grid output terminal |
| G1~G11 | Grid output terminal |
| TEST | LSI test terminal |

## KIC9164AN (IC203)


VSS 1
L-S1 2
L-S2 3
L-S3 4
L-S4 5
L-COM1 6
L-S5 7
L-S6 8
L-COM2 9
L-S7 10
L-S8 11
L-COM3 12
ST 13
GND 14
28 VDD
27 R-S1
26 R-S2
25 R-S3
24 R-S4
23 R-COM1
22 R-S5
21 R-S6
20 R-COM2
19 R-S7
18 R-S8
17 R-COM3
16 DATA
15 CK

## BA7626 (IC601, 651, 652)


Monitor OUT 1
GND 2
IN5 3
GND 4
IN4 5
CTL E 6
IN3 7
CTL D 8
16 IN1
15 CTL A
14 V OUT1
13 Vcc
12 IN2
11 CTL B
10 V OUT2
9 CTL C
6dB
LOGIC
6dB
LOGIC

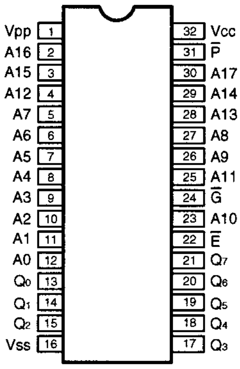
| A | B | E | MONITOR OUT |
|---|---|---|---|
| L | L | * | IN 1 |
| H | L | * | IN 2 |
| L | H | * | IN 3 |
| H | H | L | IN 4 |
| H | H | H | IN 5 |

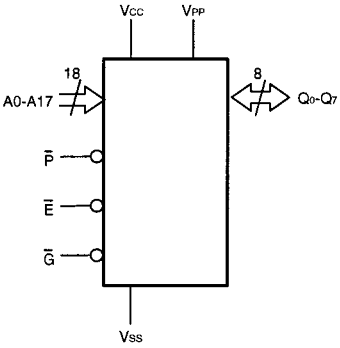
| C | D | E | V OUT 1 |
|---|---|---|---|
| L | L | * | — |
| H | L | * | IN 2 |
| L | H | * | IN 3 |
| H | H | L | IN 4 |
| H | H | H | IN 5 |

| C | D | E | V OUT 2 |
|---|---|---|---|
| L | L | * | IN 1 |
| H | L | * | — |
| L | H | * | IN 3 |
| H | H | L | IN 4 |
| H | H | H | IN 5 |

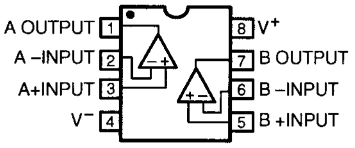
Note 1: * mark means that feasible for either H or L.
Note 2: Each input terminal is provided with sink chip clamp (BA7625).
Each input terminal takes 20kohm at the end (BA7626).

## M27W201 (IC807)

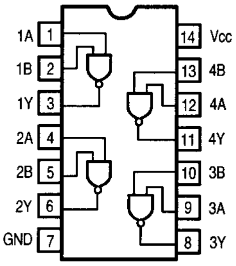

Vpp 1
A16 2
A15 3
A12 4
A7 5
A6 6
A5 7
A4 8
A3 9
A2 10
A1 11
A0 12
$Q_0$ 13
$Q_1$ 14
$Q_2$ 15
Vss 16
32 Vcc
31 $\overline{P}$
30 A17
29 A14
28 A13
27 A8
26 A9
25 A11
24 $\overline{G}$
23 A10
22 $\overline{E}$
21 $Q_7$
20 $Q_6$
19 $Q_5$
18 $Q_4$
17 $Q_3$


Vcc
$V_{PP}$
18
A0-A17
8
$Q_0$-$Q_7$
$\overline{P}$
$\overline{E}$
$\overline{G}$
Vss

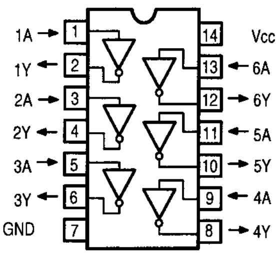
## NJM2068DD
## (IC205~210, 551, 702~704, 814~816)
## BA4510F (IC805~806)
## NJM2068MD (IC814~816)


A OUTPUT 1
A –INPUT 2
A+INPUT 3
$V^-$ 4
8 $V^+$
7 B OUTPUT
6 B –INPUT
5 B +INPUT

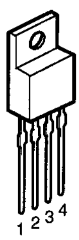
## SN74LV00APW (IC822)

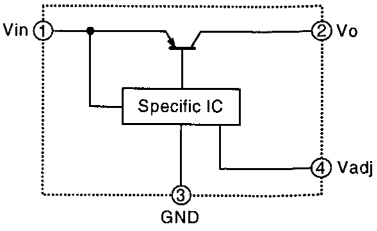

1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 Vcc
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

## 74HCU04 (IC803)

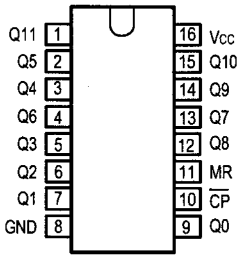

1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

## KIA78R05PI (IC653)




Vin ①
② Vo
Specific IC
④ Vadj
③
GND

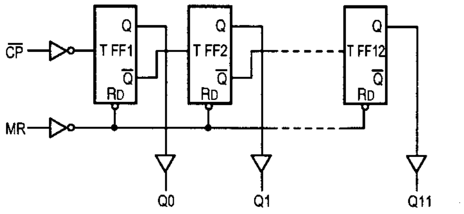
### SN74LV4040 (IC831)


Q11 1
Q5 2
Q4 3
Q6 4
Q3 5
Q2 6
Q1 7
GND 8
16 Vcc
15 Q10
14 Q9
13 Q7
12 Q8
11 MR
10 CP
9 Q0

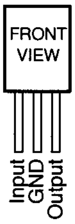
**Terminal Function**

| INPUTS | | OUTPUTS |
|---|---|---|
| CP | MR | Qn |
| ↑ | L | no change |
| ↓ | L | count |
| X | H | L |

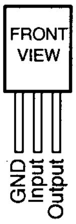
H=HIGH voltage level
L=LOW voltage level
X=don't care
↑=LOW-to-HIGH clock transition
↓=HIGH-to-LOW clock transition


CP
MR
Q
T FF1
Q
RD
Q
T FF2
Q
RD
Q
T FF12
Q
RD
Q0
Q1
Q11

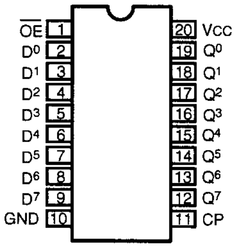
### KIA7805AP (IC104)
### KIA7815AP (IC101)
### NJM7805FA(S) (IC103, 829)


FRONT VIEW
Input
GND
Output

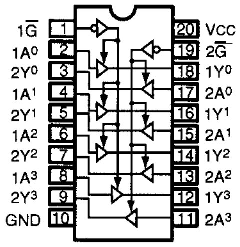
### NJM7915FA (IC102)


FRONT VIEW
GND
Input
Output

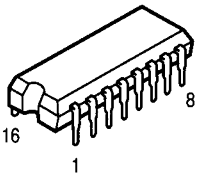
### MM74LCX574 (IC808, 809)

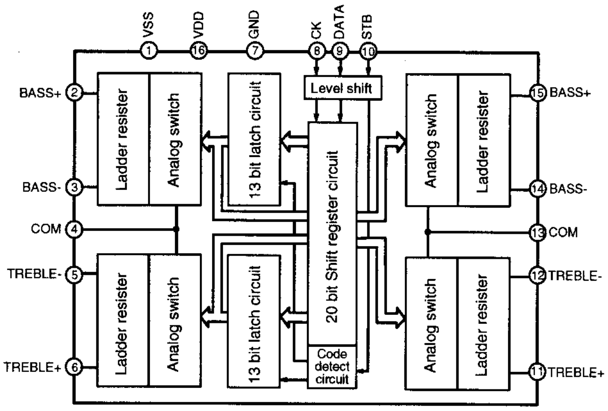

OE 1
D0 2
D1 3
D2 4
D3 5
D4 6
D5 7
D6 8
D7 9
GND 10
20 Vcc
19 Q0
18 Q1
17 Q2
16 Q3
15 Q4
14 Q5
13 Q6
12 Q7
11 CP

### MM74HCT244 (IC828, 830)


1G 1
1A0 2
2Y0 3
1A1 4
2Y1 5
1A2 6
2Y2 7
1A3 8
2Y3 9
GND 10
20 Vcc
19 2G
18 1Y0
17 2A0
16 1Y1
15 2A1
14 1Y2
13 2A2
12 1Y3
11 2A3

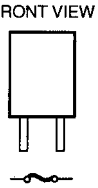
### TC9184AP (IC552)




VSS 1
VDD 16
GND 7
CK 8
DATA 9
STB 10
Level shift
BASS+ 2
BASS- 3
COM 4
TREBLE- 5
TREBLE+ 6
Ladder resister
Analog switch
13 bit latch circuit
20 bit Shift register circuit
Code detect circuit
Analog switch
Ladder resister
15 BASS+
14 BASS-
13 COM
12 TREBLE-
11 TREBLE+

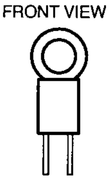
## ● IC PROTECTOR

### ICP-N15 (IC105)



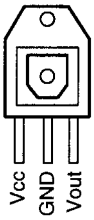
## ● POSISTOR

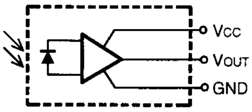
### P43T7D330BW16



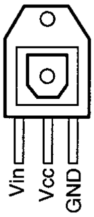
## ● OPTICAL

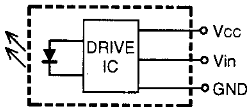
### INPUT
### GP1FA502RZ (IC817)


Vcc
GND
Vout


Vcc
Vout
GND

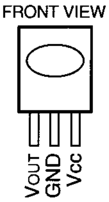
### OUTPUT
### GP1FA502TZ(IC801, 802, 803)

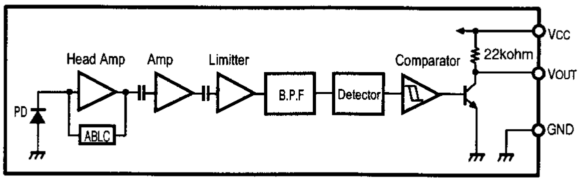



DRIVE IC
Vcc
Vin
GND

## ● IR SENSOR

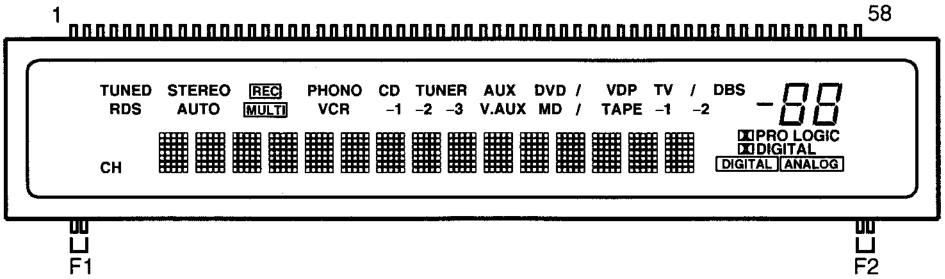
### NJL64H380A(RMC301)

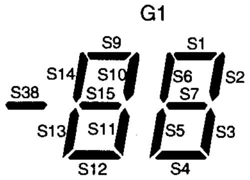

FRONT VIEW
VOUT
GND
Vcc

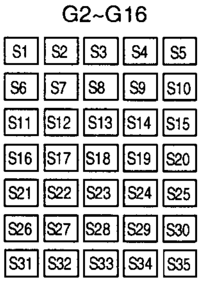

Head Amp
Amp
Limitter
Comparator
22kohm
Vcc
VOUT
GND
PD
ABLC
B.P.F
Detector

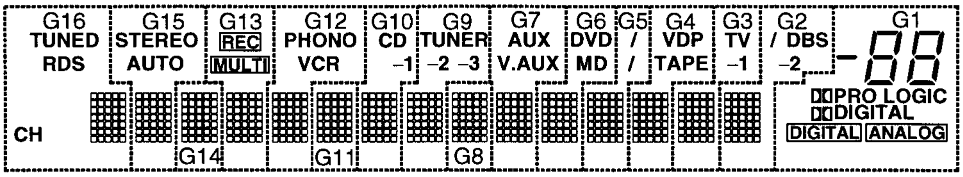
## ● FL DISPLAY

### 16-st-42GNK (FL301)


1
58
TUNED
RDS
STEREO
AUTO
REC
MULTI
PHONO
VCR
CD
-1
TUNER
-2 -3
AUX
V.AUX
DVD /
MD /
VDP
TAPE
TV /
-1 -2
DBS
CH
DD PRO LOGIC
DD DIGITAL
DIGITAL
ANALOG
F1
F2


G1
S9
S1
S14
S10
S6
S2
S38
S15
S7
S13
S11
S5
S3
S12
S4


G2~G16
S1 S2 S3 S4 S5
S6 S7 S8 S9 S10
S11 S12 S13 S14 S15
S16 S17 S18 S19 S20
S21 S22 S23 S24 S25
S26 S27 S28 S29 S30
S31 S32 S33 S34 S35


G16
TUNED
RDS
G15
STEREO
AUTO
G13
REC
MULTI
G12
PHONO
VCR
G10
CD
-1
G9
TUNER
-2 -3
G7
AUX
V.AUX
G6
DVD
MD
G5
/
/
G4
VDP
TAPE
G3
TV
-1
G2
/ DBS
-2
G1
DD PRO LOGIC
DD DIGITAL
DIGITAL
ANALOG
CH
G14
G11
G8

### Pin Assignment

| PIN NO.<br>CONNECTION | 1<br>F1 | 2<br>F1 | 3<br>S1 | 4<br>S2 | 5<br>S3 | 6<br>S4 | 7<br>S5 | 8<br>S6 | 9<br>S7 | 10<br>S8 | 11<br>S9 | 12<br>S10 | 13<br>S11 | 14<br>S12 | 15<br>S13 | 16<br>S14 | 17<br>S15 | 18<br>S16 | 19<br>S17 | 20<br>S18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIN NO.<br>CONNECTION | 21<br>S19 | 22<br>S20 | 23<br>S21 | 24<br>S22 | 25<br>S23 | 26<br>S24 | 27<br>S25 | 28<br>S26 | 29<br>S27 | 30<br>S28 | 31<br>S29 | 32<br>S30 | 33<br>S31 | 34<br>S32 | 35<br>S33 | 36<br>S34 | 37<br>S35 | 38<br>S36 | 39<br>S37 | 40<br>S38 |
| PIN NO.<br>CONNECTION | 41<br>G16 | 42<br>G15 | 43<br>G14 | 44<br>G13 | 45<br>G12 | 46<br>G11 | 47<br>G10 | 48<br>G9 | 49<br>G8 | 50<br>G7 | 51<br>G6 | 52<br>G5 | 53<br>G4 | 54<br>G3 | 55<br>G2 | 56<br>G1 | 57<br>F2 | 58<br>F2 | | |

F1, F2 : Filament
G1~G16: Grid
S1~S38 : Anode

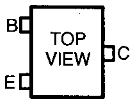
### Anode & Grid Assignment

| | G1 | G2~G16 | | G1 | G2~G16 | | G1 | G2~G16 | | G1 | G2~G16 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S1 | S1 | S1 | S10 | S10 | S10 | S19 | — | S19 | S28 | — | S28 |
| S2 | S2 | S2 | S11 | S11 | S11 | S20 | — | S20 | S29 | — | S29 |
| S3 | S3 | S3 | S12 | S12 | S12 | S21 | — | S21 | S30 | — | S30 |
| S4 | S4 | S4 | S13 | S13 | S13 | S22 | — | S22 | S31 | — | S31 |
| S5 | S5 | S5 | S14 | S14 | S14 | S23 | — | S23 | S32 | — | S32 |
| S6 | S6 | S6 | S15 | S15 | S15 | S24 | — | S24 | S33 | — | S33 |
| S7 | S7 | S7 | S16 | — | S16 | S25 | — | S25 | S34 | — | S34 |
| S8 | — | S8 | S17 | DD DIGITAL | S17 | S26 | — | S26 | S35 | — | S35 |
| S9 | S9 | S9 | S18 | DD PRO LOGIC | S18 | S27 | — | S27 | | | |

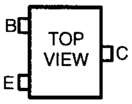
| | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G10 | G11 | G12 | G13 | G14 | G15 | G16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S36 | DIGITAL | / | TV | VDP | /(DVD) | DVD | AUX | — | TUNER | CD | — | PHONO | REC | — | STEREO | TUNED |
| S37 | ANALOG | –2 | –1 | TAPE | /(MD) | MD | V.AUX | — | –2 | –1 | — | VCR | MULTI | — | AUTO | RDS |
| S38 | S38 | DBS | — | — | — | — | — | — | –3 | — | — | — | — | — | — | CH |

## ● TRANSISTORS

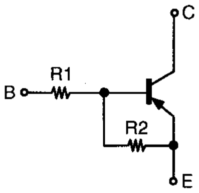
**2SC2412K**
**KTC3880S**


B
E
TOP VIEW
C

**DTA114EK**
**DTA114YK**
**DTA144EK**
**DTC114EK**
**DTC114YK**
**DTC144EK**

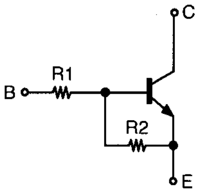

B
E
TOP VIEW
C

**DTA Series**



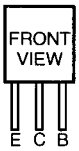
| | R1 | R2 |
|---|---|---|
| DTA114EK | 10kohm / Ω | 10kohm / Ω |
| DTA114ES | 10kohm / Ω | 10kohm / Ω |
| DTA114YK | 10kohm / Ω | 47kohm / Ω |
| DTA144EK | 47kohm / Ω | 47kohm / Ω |

**DTC Series**

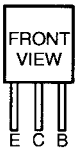


| | R1 | R2 |
|---|---|---|
| DTC114EK | 10kohm / Ω | 10kohm / Ω |
| DTC114TS | 10kohm / Ω | — |
| DTC114YK | 10kohm / Ω | 47kohm / Ω |
| DTC114YS | 10kohm / Ω | 47kohm / Ω |
| DTC144EK | 47kohm / Ω | 47kohm / Ω |
| DTC144ES | 47kohm / Ω | 47kohm / Ω |

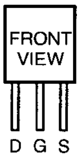
**2SC1740S**
**2SC3199Y**
**KSA916Y**
**KSA992F**
**KSC1845F**
**KTA1266Y**
**KTA1268BL**
**KTC2874B**
**KTC3198Y**
**KTC3200BL**


FRONT VIEW
E C B

**DTA114ES**
**DTC114TS**
**DTC114YS**
**DTC144ES**

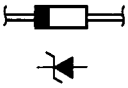

FRONT VIEW
E C B

**2SK117**

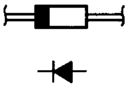

FRONT VIEW
D G S

## ● DIODES (LED included)

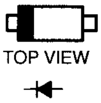
**MTZJ3.3B**
**MTZJ5.1B**
**MTZJ5.6B**
**MTZJ6.8B**
**MTZJ7.5A**
**MTZJ7.5B**
**MTZJ11B**
**MTZJ18B**
**MTZJ20B**



**1N4007**
**1SS133**

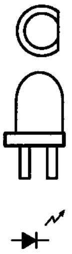


**KDS160**



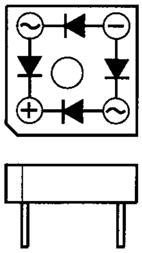
**HL-50RDRF4T**

TOP VIEW



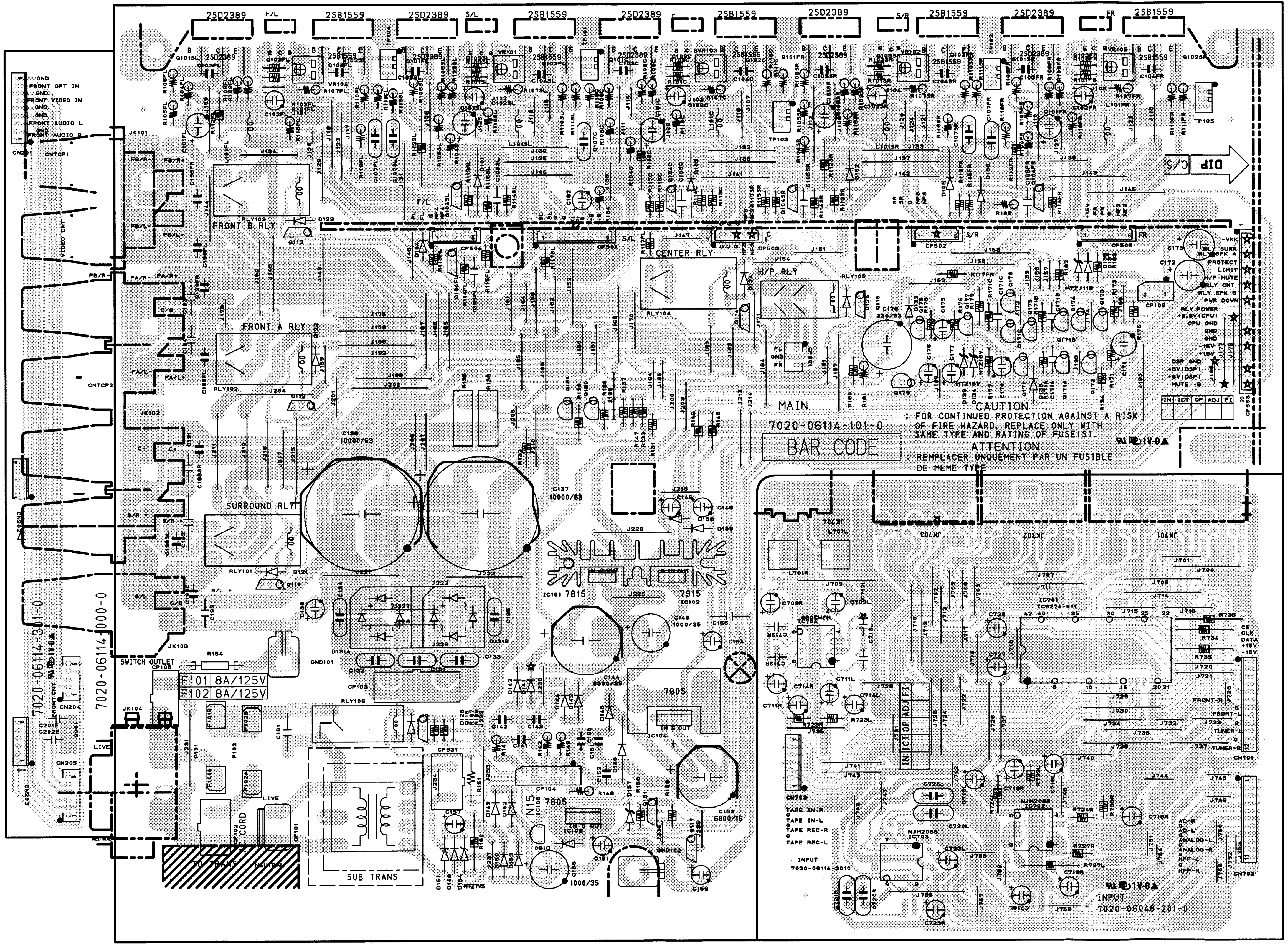
**KBPC604**

TOP VIEW



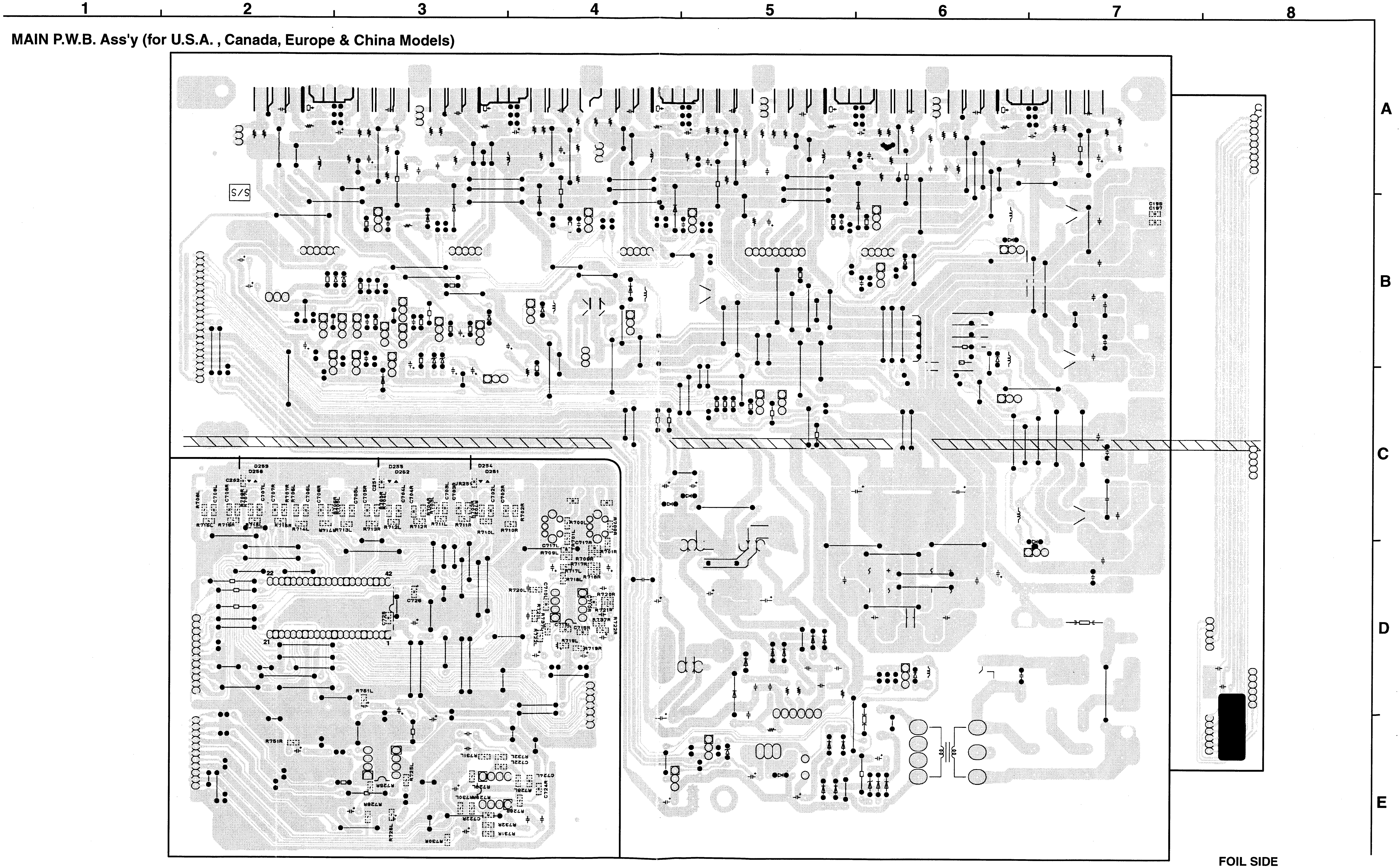
## PRINTED WIRING BOARDS

### MAIN P.W.B. Ass'y (for U.S.A. , Canada, Europe & China Models)


1
2
3
4
5
6
7
8
A
B
C
D
E
2SD2389
F/L
2SB1559
S/L
C
S/R
FR
FRONT B RLY
FRONT A RLY
SURROUND RLY
CENTER RLY
H/P RLY
DIP
C/S
MAIN
7020-06114-101-0
BAR CODE
CAUTION
: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE HAZARD. REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE(S).
ATTENTION
: REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE
C136 10000/63
C137 10000/63
IC101 7815
7915 IC102
C144 3300/35
C145 1000/35
C153 6800/16
C158 1000/35
7805
IC104
IC103 7805
SWITCH OUTLET
F101 8A/125V
F102 8A/125V
SUB TRANS
TO TRANS
LIVE
NEUTRAL
CORD
7020-06114-301-0
7020-06114-1000-0
IN ICT OP ADJ FI
IC701 TC9274-011
NJM2068 IC702
NJM2068 IC703
INPUT
7020-06048-201-0
INPUT 7020-06114-2010
TAPE IN-R
TAPE IN-L
TAPE REC-R
TAPE REC-L
FRONT OPT IN
FRONT VIDEO IN
FRONT AUDIO L
FRONT AUDIO R
CE
CLK
DATA
+15V
-15V
FRONT-R
FRONT-L
TUNER-L
TUNER-R
AD-R
AD-L
ANALOG-L
ANALOG-R
HPF-L
HPF-R
RLY SURR
RLY SPK A
PROTECT
LIMIT
H/P MUTE
RLY CNT
RLY SPK B
PWR DOWN
RLY.POWER
+5.6V(CPU)
CPU GND
DSP GND
+5V(DSP)
MUTE +B
JK101
JK102
JK103
JK104
JK701
JK702
JK703
JK704
CN201
CN202
CN203
CN204
CN205
CN701
CN702
CN703
CNTCP1
CNTCP2

COMPONENT SIDE

## MAIN P.W.B. Ass'y (for U.S.A. , Canada, Europe & China Models)


1
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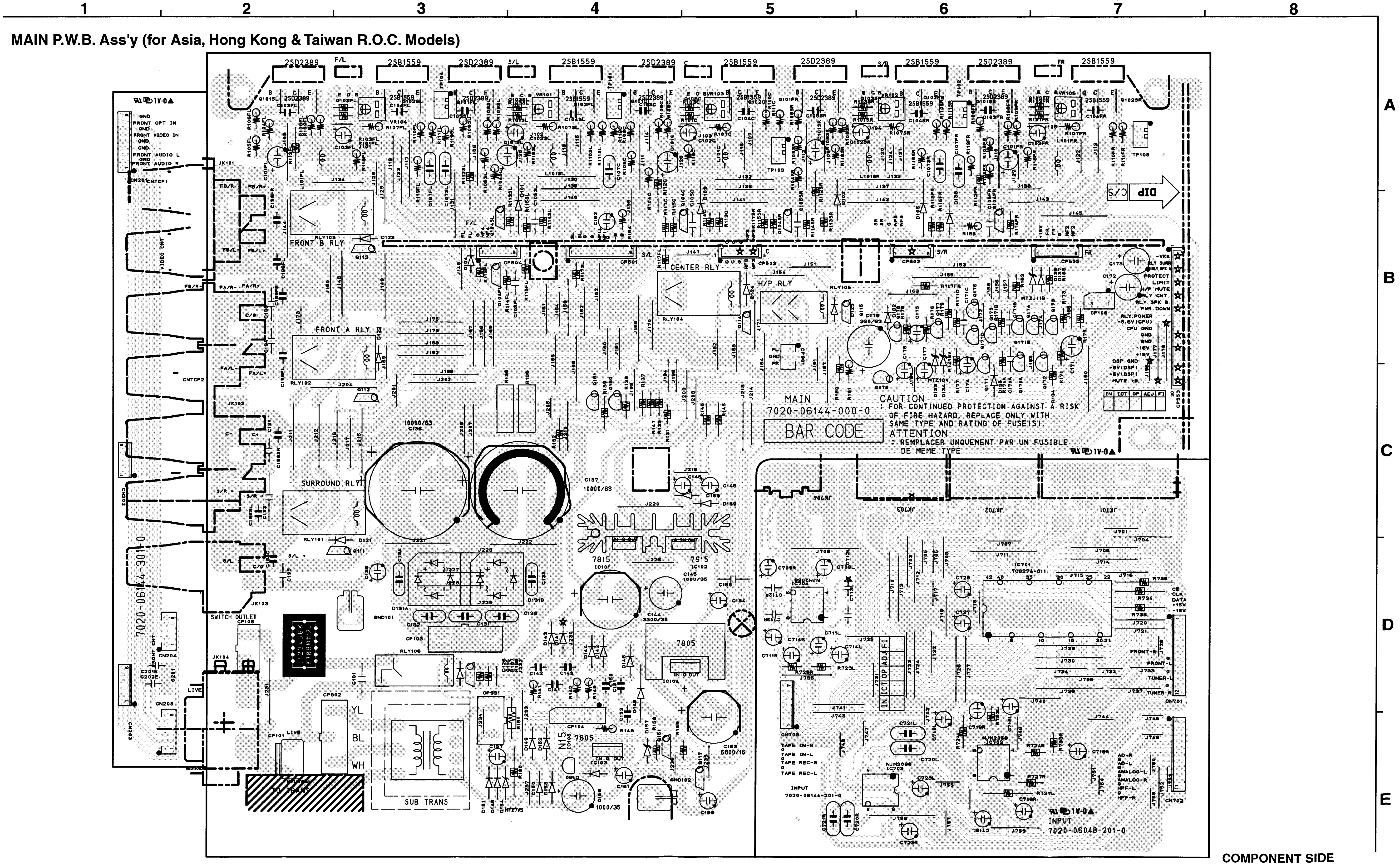
6
7
8
A
B
C
D
E
S/S
D253
D256
D255
D262
D254
D261
C196
C197
22
42
21
1
R751L
R751R
C726
R700L
R701R
R710L
R710R
R720L
R720R

FOIL SIDE

## MAIN P.W.B. Ass'y (for Asia, Hong Kong & Taiwan R.O.C. Models)


1
2
3
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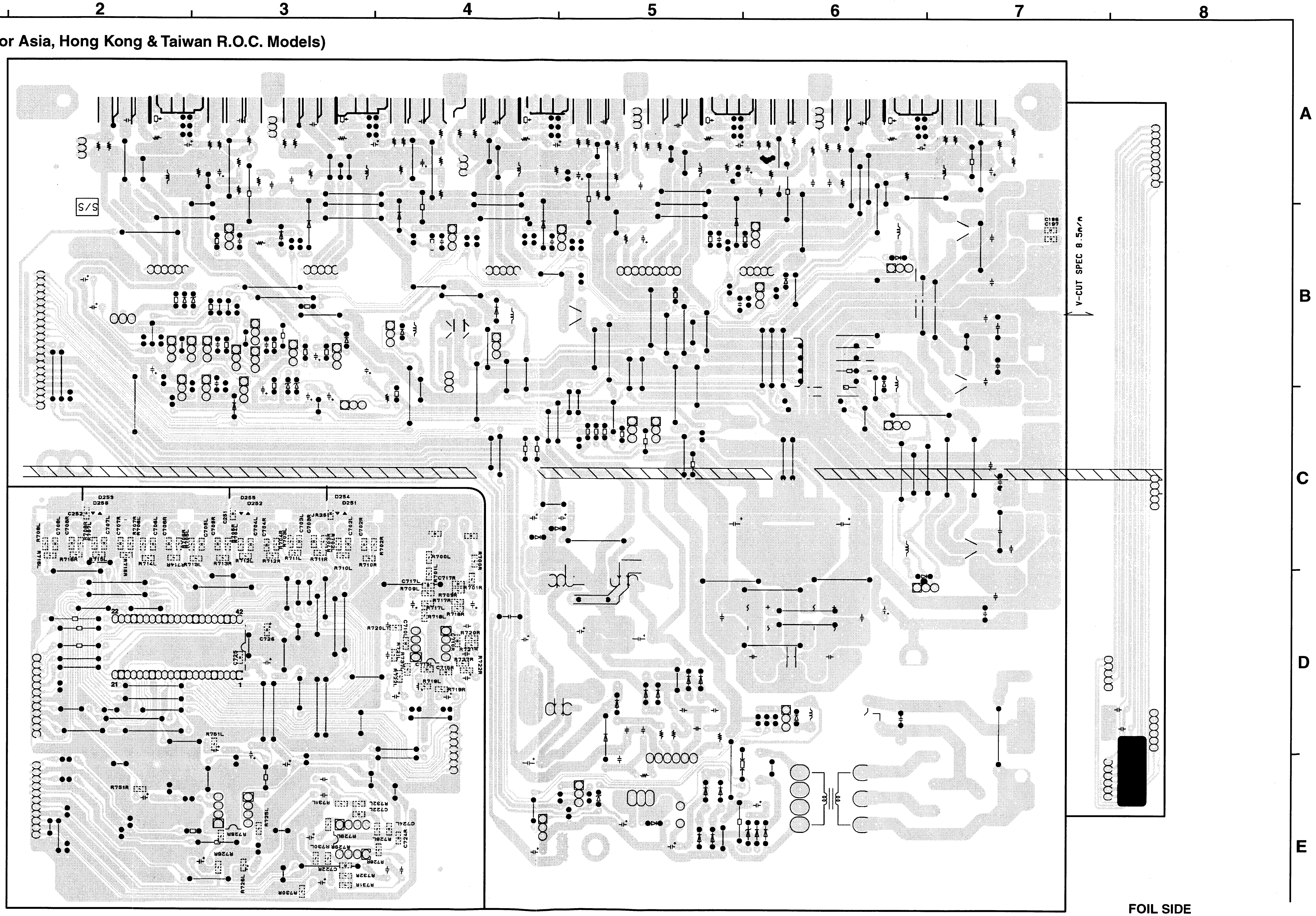
6
7
8
A
B
C
D
E
2SD2389
2SB1559
F/L
S/L
C
S/R
FR
DIP
C/S
FRONT B RLY
FRONT A RLY
SURROUND RLY
CENTER RLY
H/P RLY
RLY101
RLY102
RLY103
RLY104
RLY105
RLY106
JK101
JK102
JK103
JK104
GND
FRONT OPT IN
FRONT VIDEO IN
FRONT AUDIO L
FRONT AUDIO R
CN201
CN202
CN203
CN204
CN205
CNTCP1
CNTCP2
VIDEO CNT
FRONT CNT
FB/R-
FB/R+
FB/L-
FB/L+
FA/R-
FA/R+
FA/L-
FA/L+
C/S
C-
C+
S/R -
S/R +
S/L -
S/L +
7020-06144-301-0
SWITCH OUTLET
CP105
LIVE
NEUTRAL
CP101
CP902
CP931
YL
BL
WH
SUB TRANS
10000/63
C136
C137
10000/63
7815
IC101
7915
IC102
C145
1000/35
C144
3300/35
7805
IC104
7805
IC103
C153
6800/16
1000/35
MTZTV5
N15
MAIN
7020-06144-000-0
BAR CODE
CAUTION
: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE(S).
ATTENTION
: REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE
1V-0
-VKK
RLY SURR
RLY SPK A
PROTECT
LIMIT
H/P MUTE
RLY CNT
RLY SPK B
PWR DOWN
RLY.POWER
+5.8V(CPU)
CPU GND
GND
GND
-15V
+15V
DSP GND
+5V(DSP)
+5V(DSP)
MUTE +8
CP503
CP501
CP502
CP504
CP505
CP106
IN ICT OP ADJ FI
JK701
JK702
JK703
JK704
IC701
TC9274-011
NJM2068
IC702
NJM2068
IC703
CE
CLK
DATA
+15V
-15V
FRONT-R
FRONT-L
TUNER-L
TUNER-R
CN701
CN702
CN703
TAPE IN-R
TAPE IN-L
TAPE REC-R
TAPE REC-L
AD-R
AD-L
ANALOG-L
ANALOG-R
HPF-L
HPF-R
INPUT
7020-06144-201-0
INPUT
7020-06048-201-0

COMPONENT SIDE

## MAIN P.W.B. Ass'y (for Asia, Hong Kong & Taiwan R.O.C. Models)


1
2
3
4
5
6
7
8
A
B
C
D
E
S/S
V-CUT SPEC 8.5m/m
C196
C197
D253
D256
D255
D252
D254
D251
C252
C251
JR251
R708L
C708L
C708R
R708R
R707L
C707L
C707R
R707R
R706L
C706L
C706R
R706R
R705L
C705L
C705R
R705R
R702L
C704L
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R704R
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R702L
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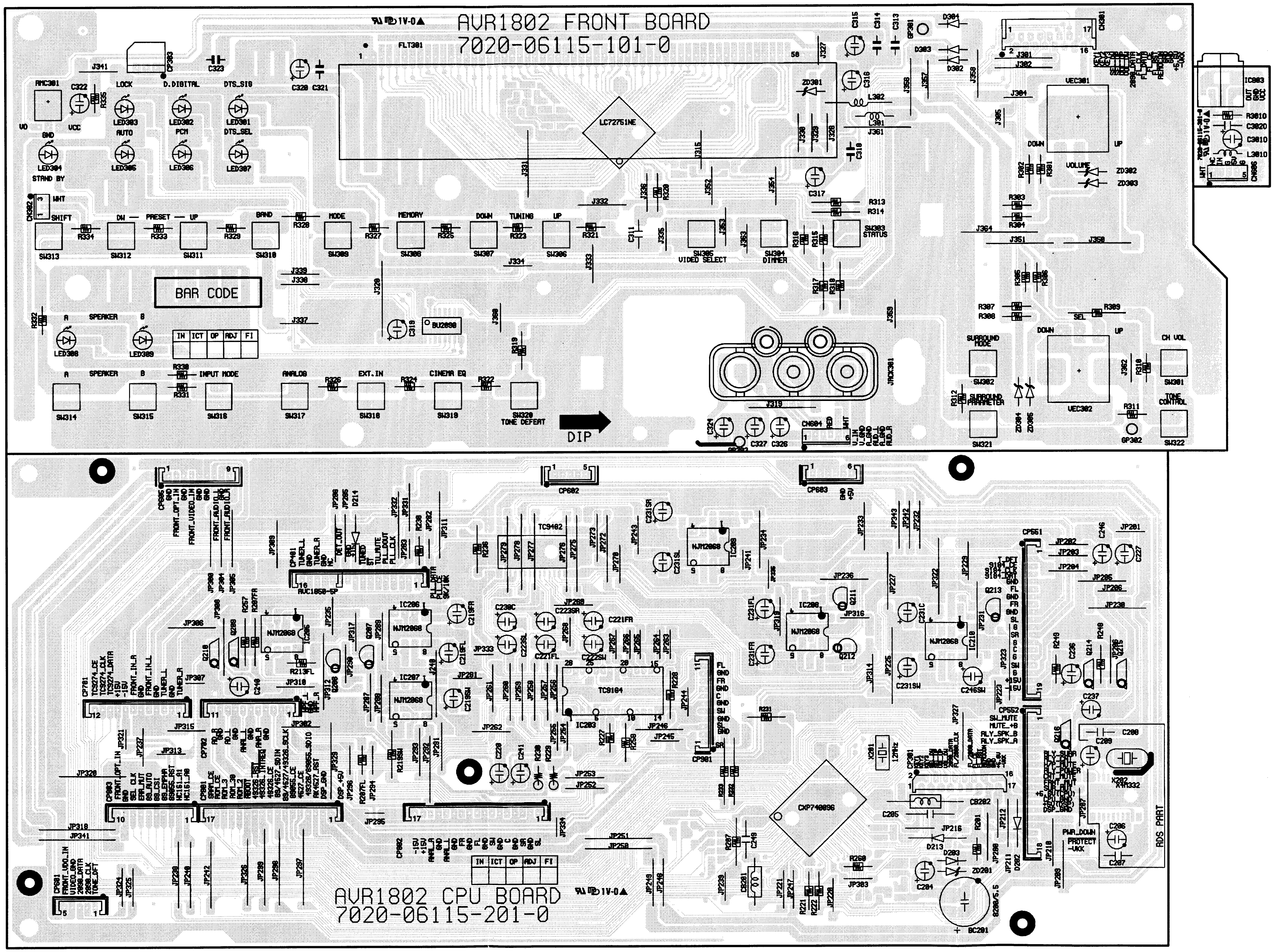
C702R
R702R
R716L
R716R
R715L
R715R
R714L
R714R
R713L
R713R
R712L
R712R
R711L
R711R
R710L
R710R
R700L
R700R
R701L
C717L
C717R
R709L
R709R
R701R
R717R
R717L
R718L
R718R
22
42
21
1
C726
C725
R720L
C710L
R720R
C710R
R721L
R721R
R737L
R737R
R722L
R722R
C715L
C715R
R719L
R719R
R751L
R751R
R725L
R725R
R726R
R726L
R731L
R732L
C722L
C724L
C724R
R728L
R729R
R730L
R728R
C722R
R732R
R731R
R730R

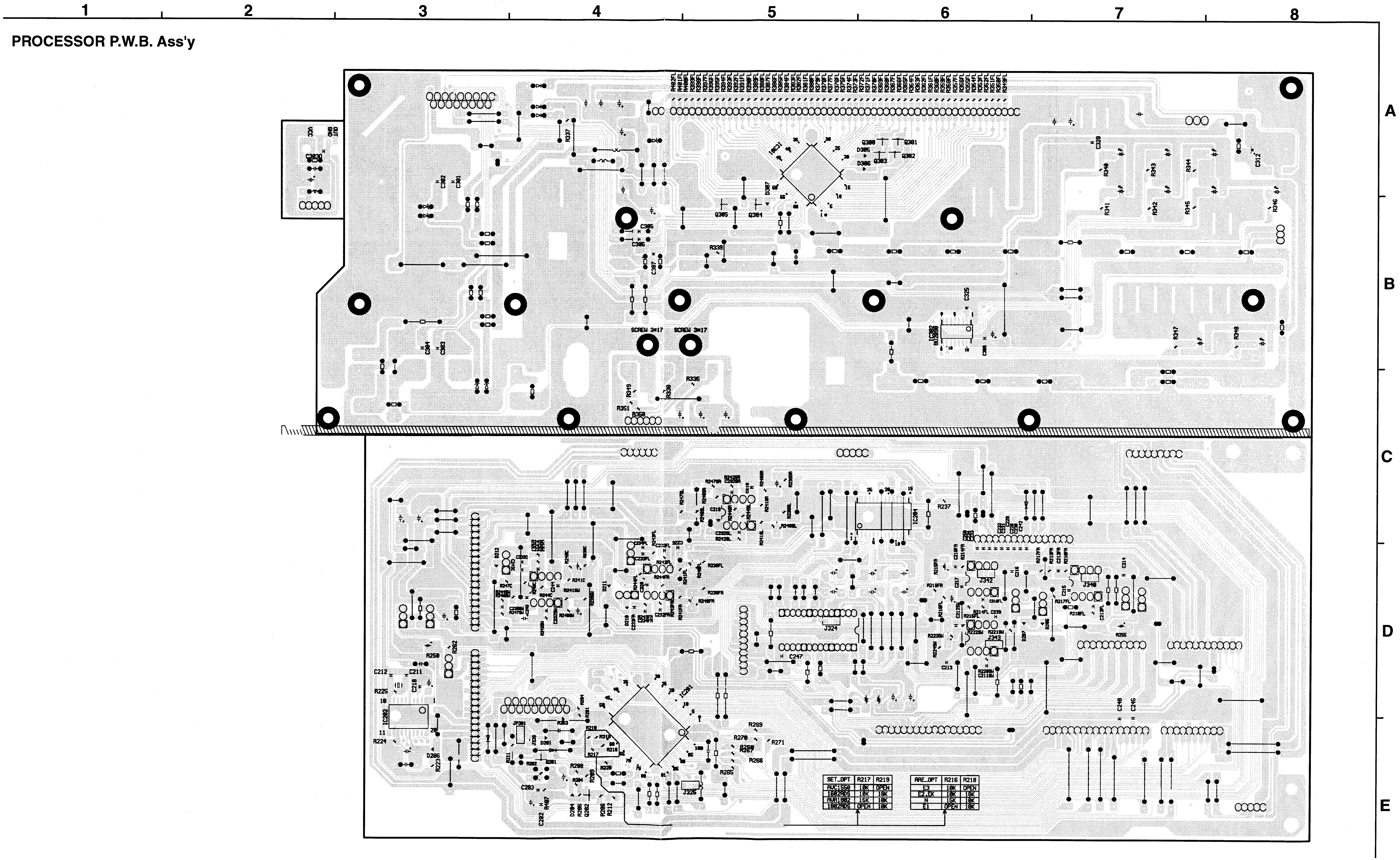
FOIL SIDE

## PROCESSOR P.W.B. Ass'y


AVR1802 FRONT BOARD
7020-06115-101-0
BAR CODE
DIP
AVR1802 CPU BOARD
7020-06115-201-0
RDS PART

COMPONENT SIDE

## PROCESSOR P.W.B. Ass'y


1
2
3
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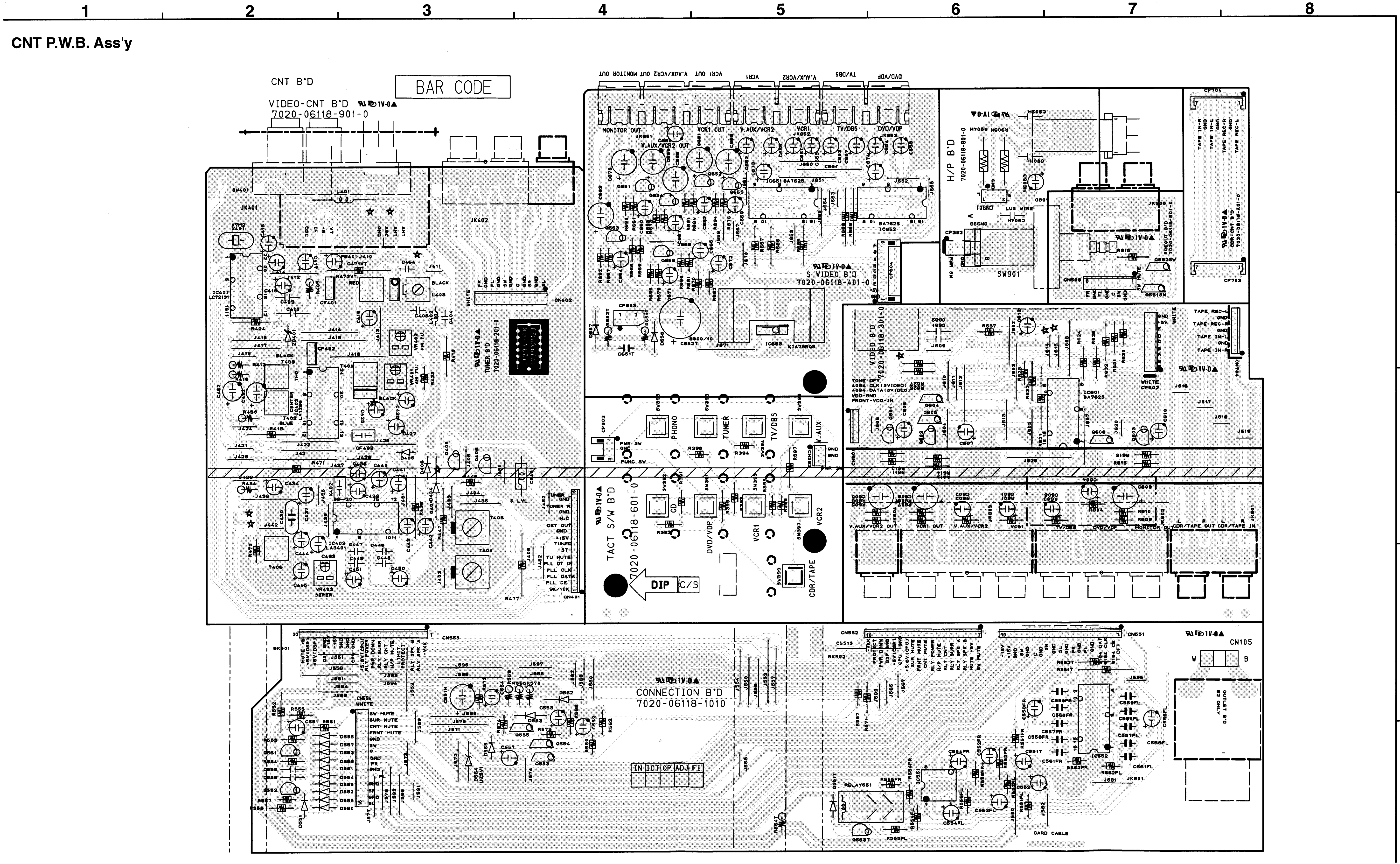
5
6
7
8
A
B
C
D
E
SCREW 3x17
SCREW 3x17
VCC
GND
OUT
IC201
IC202
IC204
J324
J326
J340
J342
J343
R336
R337
R339
C325
C328
C247
C212
C211
R225
R224
R223
R250
R269
R270
R271
R266
R265

| SET_OPT | R217 | R219 |
|---|---|---|
| AVC1550 | 10K | OPEN |
| 1602RDS | 10K | 10K |
| AVR1802 | 15K | 10K |
| 1802RDS | OPEN | 10K |

| ARE_OPT | R216 | R218 |
|---|---|---|
| E3 | 10K | OPEN |
| E2,EK | 10K | 10K |
| N | 15K | 10K |
| E1 | OPEN | 10K |

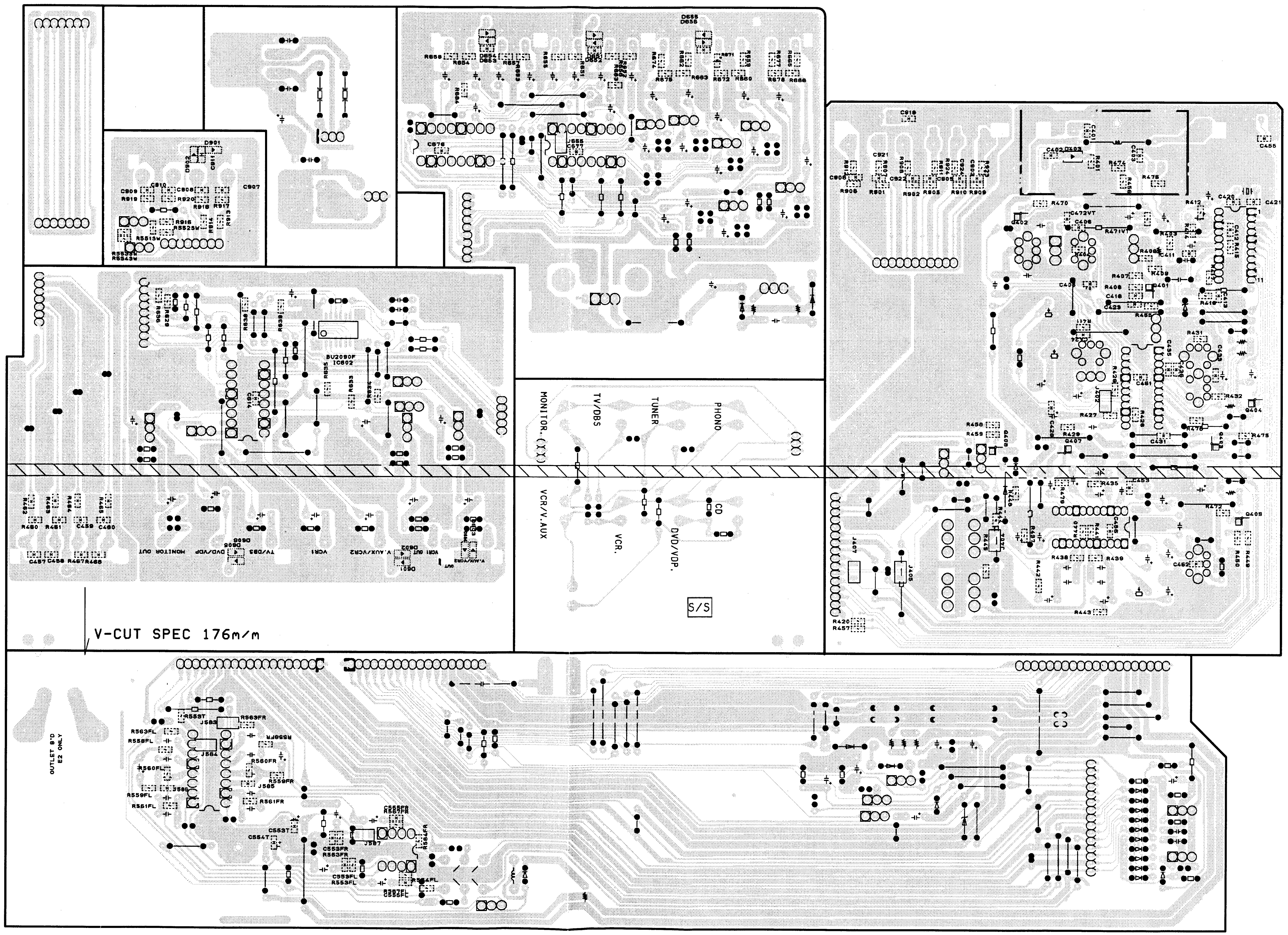
FOIL SIDE

## CNT P.W.B. Ass'y


1
2
3
4
5
6
7
8
A
B
C
D
E
CNT B'D
VIDEO-CNT B'D
7020-06118-901-0
BAR CODE
JK401
JK402
SW401
L401
IC401 LC72131
TUNER B'D
7020-06118-201-0
CN402
VR403 SEPER.
IC403 LA3401
CN401
MONITOR OUT
V.AUX/VCR2 OUT
VCR1 OUT
V.AUX/VCR2
VCR1
TV/DBS
DVD/VDP
S VIDEO B'D
7020-06118-401-0
IC651 BA7625
IC652 BA7625
IC653 KIA78R05
H/P B'D
7020-06118-801-0
CN901
SW901
LUG WIRE
PRE-OUT B'D
7020-06118-501-0
CDR-CNT B'D
7020-06118-401-0
CP703
CP704
TAPE IN-R
TAPE IN-L
TAPE REC-R
TAPE REC-L
VIDEO B'D
7020-06118-301-0
IC601 BA7625
PHONO
TUNER
TV/DBS
V.AUX
CD
DVD/VDP
VCR1
VCR2
CDR/TAPE
PWR SW
FUNC SW
TACT S/W B'D
7020-06118-601-0
DIP
C/S
V.AUX/VCR2 OUT
VCR1 OUT
V.AUX/VCR2
VCR1
TV/DBS
DVD/VDP
MONITOR OUT
CDR/TAPE OUT
CDR/TAPE IN
CN553
CN554
CN552
CN551
CONNECTION B'D
7020-06118-1010
IN
ICT
OP
ADJ
FI
RELAY551
IC552
CARD CABLE
CN105
W
B
OUTLET B'D
E2 ONLY

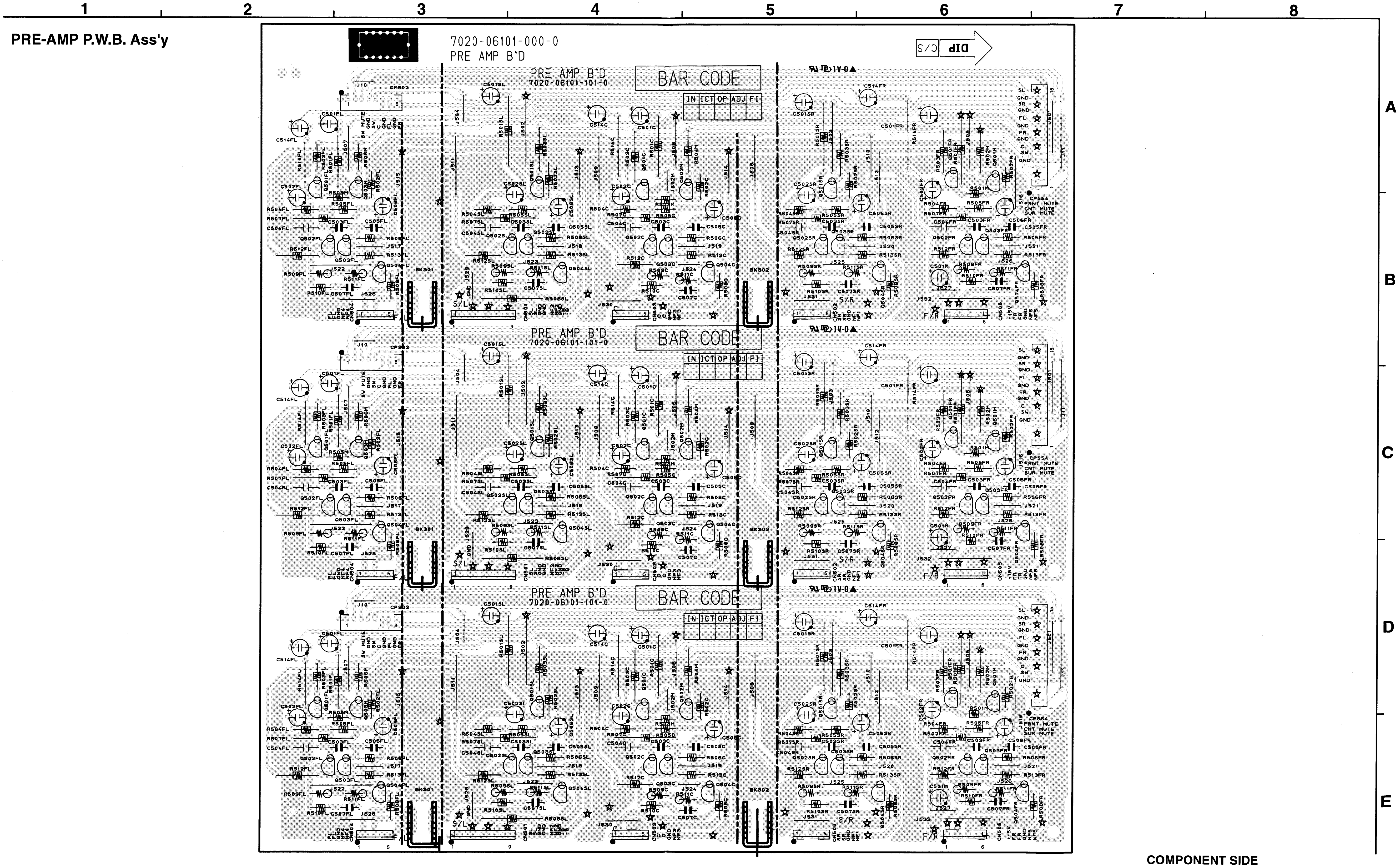
COMPONENT SIDE

## CNT P.W.B. Ass'y


1
2
3
4
5
6
7
8
A
B
C
D
E
V-CUT SPEC 176m/m
MONITOR.(X)
TV/DBS
TUNER
PHONO
(X)
VCR/V.AUX
VCR.
DVD/VDP.
CD
S/S
BU2090F
IC602
MONITOR OUT
DVD/VDP
TV/DBS
VCR1
V.AUX/VCR2
VCR1 OUT
OUTLET 8'D E2 ONLY
D901
D655
D656
C918
R420
R457

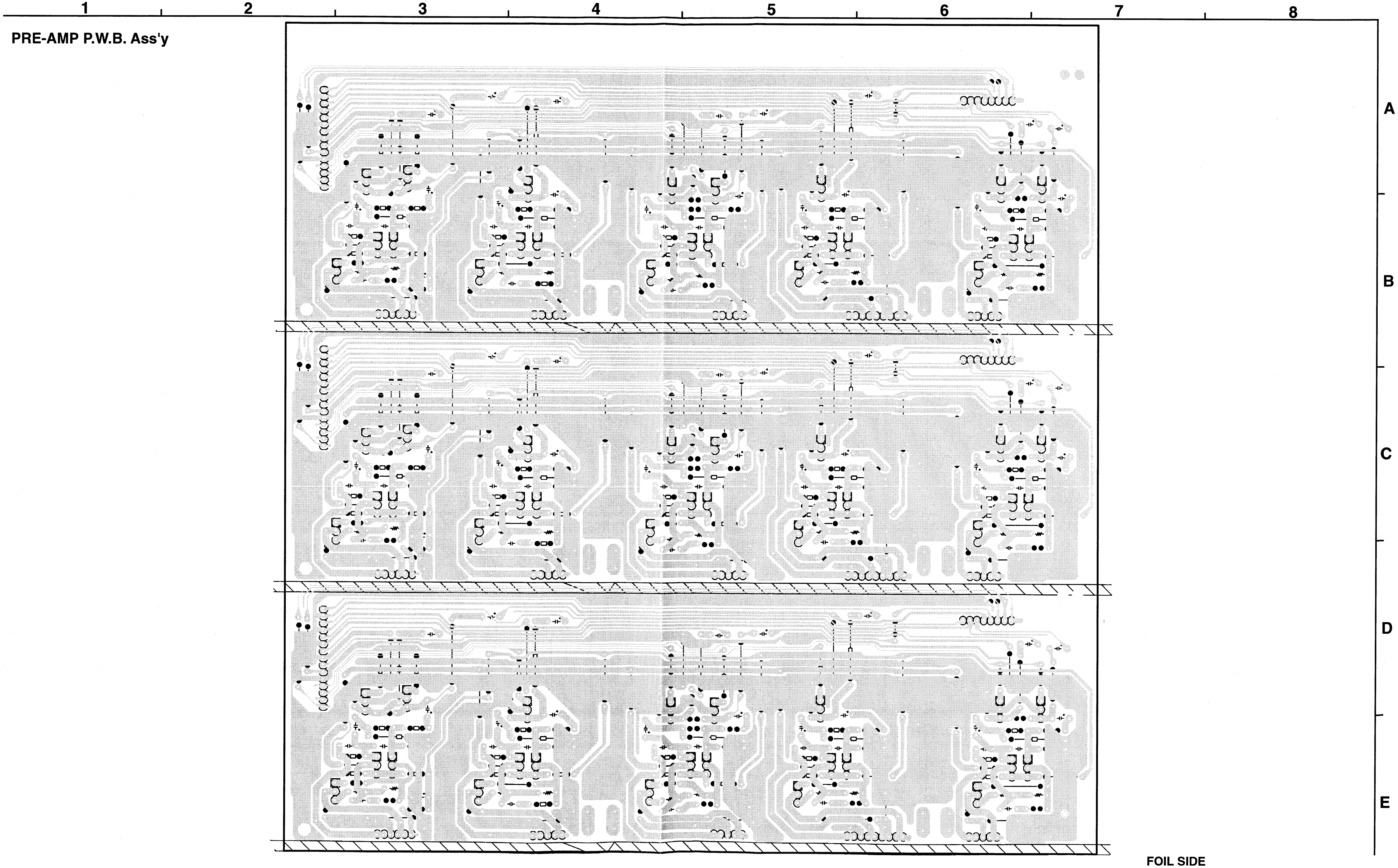
FOIL SIDE

## PRE-AMP P.W.B. Ass'y


1
2
3
4
5
6
7
8
A
B
C
D
E
7020-06101-000-0
PRE AMP B'D
C/S
DIP
PRE AMP B'D
7020-06101-101-0
BAR CODE
IN
ICT
OP
ADJ
FI
1V-0▲
J10
CP802
BK301
BK302
CN501
CN502
CN503
CN504
CN505
S/L
S/R
F/R
C
CP554
FRNT MUTE
CNT MUTE
SUR MUTE
SL
GND
SR
FL
FR
SW
J501
J511

COMPONENT SIDE

**PRE-AMP P.W.B. Ass'y**


1
2
3
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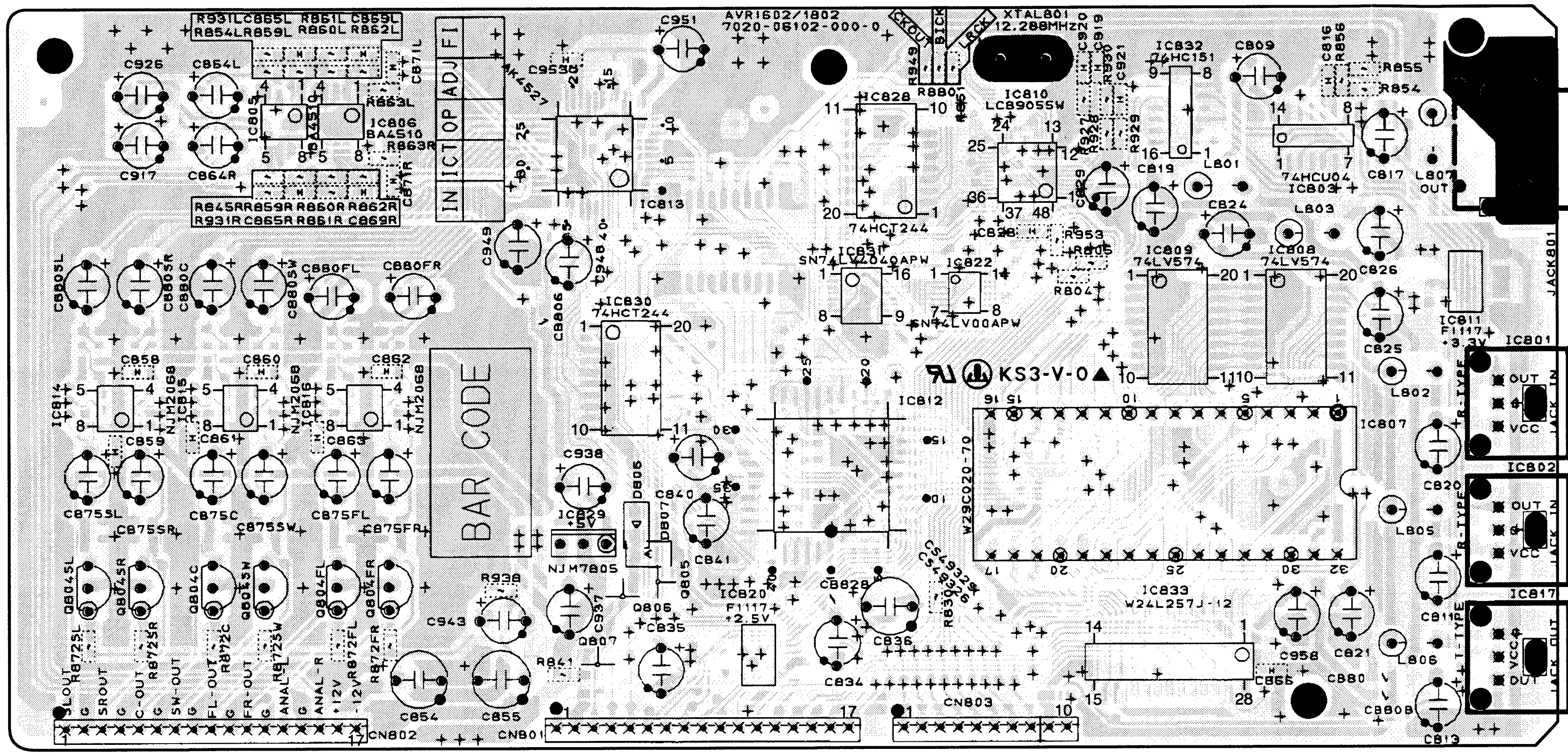
6
7
8
A
B
C
D
E

FOIL SIDE

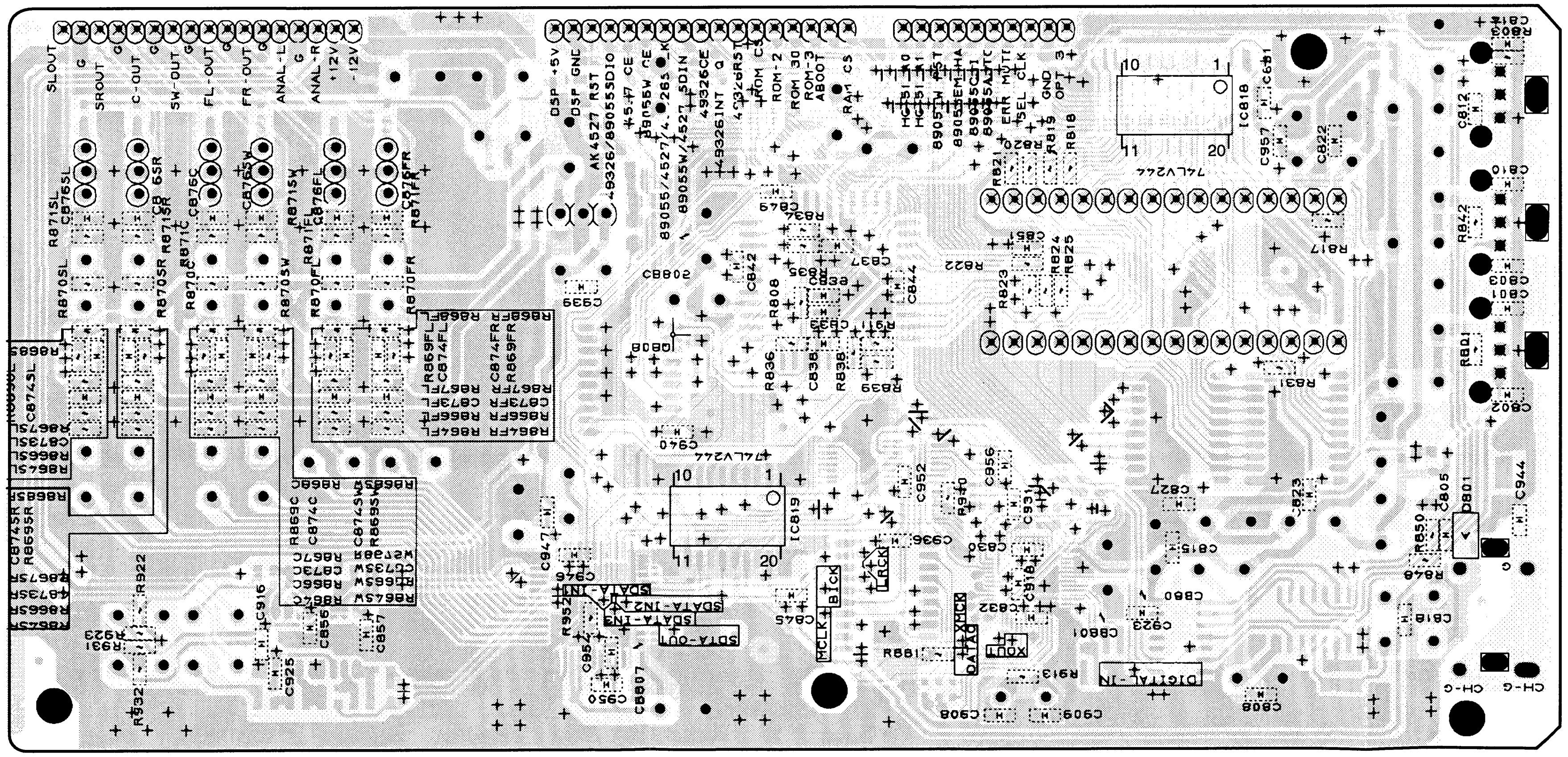
1 2 3 4 5 6 7 8

A B C D E

## DSP P.W.B. Ass'y


AVR1602/1802
7020-06102-000-0
XTAL801 12.288MHZ
IC828 74HCT244
IC810 LC89055W
IC832 74HC151
IC803 74HCU04
IC806 BA4510
IC813
IC830 74HCT244
IC831 SN74LV04APW
IC822 SN74LV00APW
IC809 74LV574
IC808 74LV574
IC811 F1117 +3.3V
IC812
KS3-V-0
IC807 W29C020-70
IC833 W24L257J-12
IC814 NJM2068
IC815 NJM2068
IC816 NJM2068
IC829 NJM7805
IC820 F1117 +2.5V
BAR CODE
IN ICT OP ADJ FI
JACK801 COAXIAL
IC801 OPTICAL1
IC802 OPTICAL2
IC817 OPTICAL OUT
CN802
CN801
CN803
SLOUT G SROUT G C-OUT G SW-OUT G FL-OUT G FR-OUT G ANAL-L G ANAL-R +12V -12V

COMPONENT SIDE


SLOUT G SROUT G C-OUT G SW-OUT G FL-OUT G FR-OUT G ANAL-L G ANAL-R +12V -12V
IC818 74LV244
IC819 74LV244
SDATA-IN1
SDATA-IN2
SDATA-IN3
SDATA-OUT
MCLK
BICK
LRCK
XMCK
DATAO
XOUT
DIGITAL-IN
CH-G

FOIL SIDE

1 2 3 4

## VOLTAGE P.W.B. Ass'y

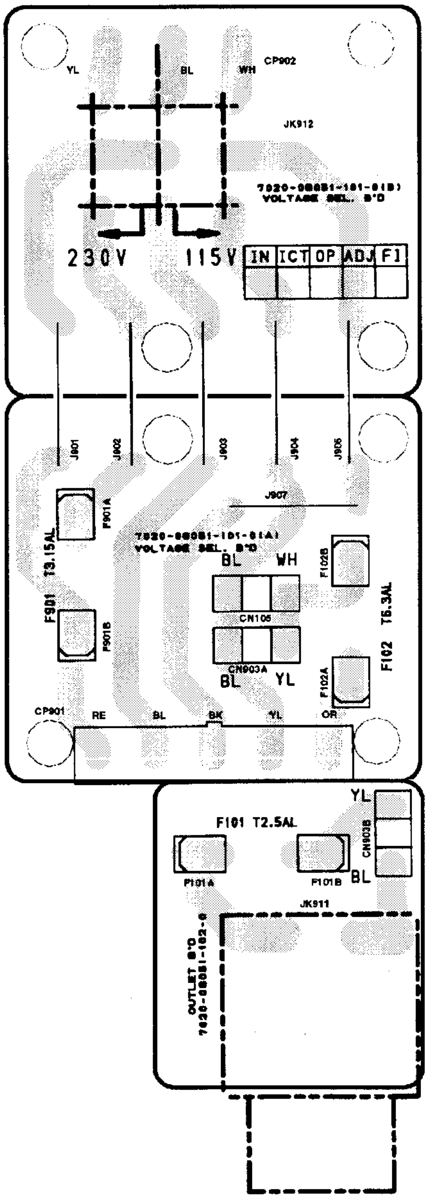
A

B

C

D

E


YL
BL
WH
CP902
JK912
7020-06081-101-0(B)
VOLTAGE SEL. B'D
230V
115V
IN
ICT
OP
ADJ
F1
J901
J902
J903
J904
J905
J907
F901A
F901 T3.15AL
F901B
7020-06081-101-0(A)
VOLTAGE SEL. B'D
BL
WH
CN105
CN903A
BL
YL
F102B
F102 T6.3AL
F102A
CP901
RE
BL
BK
YL
OR
YL
F101 T2.5AL
CN903B
F101A
F101B
BL
JK911
OUTLET B'D
7020-06081-102-0

COMPONENT SIDE

# NOTE FOR PARTS LIST

- Part indicated with the mark "◉" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

**WARNING:**

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

## ● Resistors

| Ex.: | RN | 14K | 2E | 182 | G | FR |
|---|---|---|---|---|---|---|
| | Type | Shape and performance | Power | Resistance | Allowable error | Others |

| | | | |
|---|---|---|---|
| RD : Carbon | 2B : 1/8W | F : ±1% | P : Pulse-resistant type |
| RC : Composition | 2E : 1/4W | G : ±2% | NL : Low noise type |
| RS : Metal oxide film | 2H : 1/2W | J : ±5% | NB : Non-burning type |
| RW : Winding | 3A : 1W | K : ±10% | FR : Fuse-resistor |
| RN : Metal film | 3D : 2W | M : ±20% | F : Lead wire forming |
| RK : Metal mixture | 3F : 3W | | |
| | 3H : 5W | | |

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number.
2-digit effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
1-digit effective number.
2-digit effective number, decimal point indicated by R.

• Units: ohm

## ● Capacitors

| Ex.: | CE | 04W | 1H | 2R2 | M | BP |
|---|---|---|---|---|---|---|
| | Type | Shape and performance | Dielectric strength | Capacity | Allowable error | Others |

| | | | |
|---|---|---|---|
| CE : Aluminum foil electrolytic | 0J : 6.3V | F : ±1% | HS : High stability type |
| CA : Aluminum solid electrolytic | 1A : 10V | G : ±2% | BP : Non-polar type |
| CS : Tantalum electrolytic | 1C : 16V | J : ±5% | HR : Ripple-resistant type |
| CQ : Film | 1E : 25V | K : ±10% | DL : For change and discharge |
| CK : Ceramic | 1V : 35V | M : ±20% | HF : For assuring high requency |
| CC : Ceramic | 1H : 50V | Z : +80% | U : UL part |
| CP : Oil | 2A : 100V | −20% | C : CSA part |
| CM : Mica | 2B : 125V | P : +100% | W : UL-CSA type |
| CF : Metallized | 2C : 160V | −0% | F : Lead wire forming |
| CH : Metallized | 2D : 200V | C : ±0.25pF | |
| | 2E : 250V | D : ±0.5pF | |
| | 2H : 500V | = : Others | |
| | 2J : 630V | | |

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
Indicates number of zeros after effective number.
2-digit effective number.

• Units: μF.

2 R 2 ⇒ 2.2μF
1-digit effective number.
2-digit effective number, decimal point indicated by R.

• Units: μF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022μF
(More than 2)—Indicates number of zeros after effective number.
2-digit effective number.

• Units: pF.

2 2 1 ⇒ 220pF
(0 or 1) —— Indicates number of zeros after effective number.
2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

# PARTS LIST OF P.W.B. UNIT

## MAIN P.W.B. ASS'Y

**Note:** The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A. model, Canada model
EU: U.S.A. model (AVR-882)
E2: Europe model
E1: Asia model
E1C: China model
E1H: Hong Kong model
E1T: Taiwan R.O.C. model

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC101 | 963 0057 903 | IC KIA7815AP | |
| IC102 | 963 0044 806 | IC NJM7915FA | |
| IC103 | 960 0196 001 | IC NJM7805FA (S) | |
| IC104 | 963 0057 709 | IC KIA7805AP | |
| IC105 | 960 0195 808 | IC protector ICP-N15 | |
| IC701 | 963 0083 207 | IC TC9274N-011 | |
| IC702~704 | 960 0174 502 | IC NJM2068DD | |
| Q104C | 960 0196 506 | Transistor KSC1845F | |
| Q104FL,FR | 960 0196 506 | Transistor KSC1845F | |
| Q104SL,SR | 960 0196 506 | Transistor KSC1845F | |
| Q111~115 | 960 0196 904 | Transistor DTC114YS (NPN) | |
| Q116 | 960 0196 409 | Transistor 2SC1740SR | |
| Q117 | 960 0196 904 | Transistor DTC114YS (NPN) | |
| Q151 | 960 0196 409 | Transistor 2SC1740SR | |
| Q171~177 | 960 0005 202 | Transistor KTC3198 (Y) | |
| Q171A~C | 960 0196 302 | Transistor KTA1268BL | |
| Q178 | 960 0005 105 | Transistor KTA1266Y | |
| Q179 | 960 0189 005 | Transistor KSA916Y | |
| Q180,181 | 960 0196 302 | Transistor KTA1268BL | |
| D101~105 | 963 0020 309 | Diode 1SS133T | |
| D121~126 | 963 0020 309 | Diode 1SS133T | |
| D131A,B | 960 0197 107 | Diode KBPC604 | |
| D132 | 963 0020 309 | Diode 1SS133T | |
| D133,134 | 963 0046 202 | Zener diode MTZJ18B | |
| D135 | 963 0020 309 | Diode 1SS133T | |
| D136 | 963 0058 504 | Zener diode MTZJ11B | |
| D137 | 963 0020 309 | Diode 1SS133T | |
| D138 | 963 0058 407 | Diode IN4007 | |
| D141~146 | 963 0058 407 | Diode IN4007 | |
| D148 | 963 0020 309 | Diode 1SS133T | |
| D149,150 | 963 0058 407 | Diode IN4007 | |
| D151 | 963 0020 309 | Diode 1SS133T | |
| D152,153 | 963 0058 407 | Diode IN4007 | |
| D154 | 963 0047 405 | Zener diode MTZJ7.5B | |
| D157 | 960 0014 905 | Zener diode MTZJ20B | |
| D158~160 | 963 0020 309 | Diode 1SS133T | |
| D251~256 | 960 0197 000 | Diode KDS160 | |
| **RESISTORS GROUP** | | | |
| R104C | 244 2052 957 | Metal oxide 5.6kohm 1W | |
| R104FL,FR | 244 2052 957 | Metal oxide 5.6kohm 1W | |
| R104SL,SR | 244 2052 957 | Metal oxide 5.6kohm 1W | |
| R105C | 244 2052 957 | Metal oxide 5.6kohm 1W | |
| R105FL,FR | 244 2052 957 | Metal oxide 5.6kohm 1W | |
| R105SL,SR | 244 2052 957 | Metal oxide 5.6kohm 1W | |
| R106C | 963 9003 068 | Metal film 4.7 ohm 1/4W (NB) | |
| R106FL,FR | 963 9003 068 | Metal film 4.7 ohm 1/4W (NB) | |
| R106SL,SR | 963 9003 068 | Metal film 4.7 ohm 1/4W (NB) | |
| R107C | 963 9003 068 | Metal film 4.7 ohm 1/4W (NB) | |
| R107FL,FR | 963 9003 068 | Metal film 4.7 ohm 1/4W (NB) | |
| R107SL,SR | 963 9003 068 | Metal film 4.7 ohm 1/4W (NB) | |
| R108C | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R108FL,FR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R108SL,SR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R109C | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R109FL,FR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R109SL,SR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R110C | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R110FL,FR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R110SL,SR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R111C | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R111FL,FR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R111SL,SR | 244 2043 982 | Metal oxide 0.22ohm 1W | |
| R118C | 244 2043 937 | Metal oxide 10 ohm 1W | |
| R118FL,FR | 244 2043 937 | Metal oxide 10 ohm 1W | |
| R118SL,SR | 244 2043 937 | Metal oxide 10 ohm 1W | |
| R119C | 244 2043 937 | Metal oxide 10 ohm 1W | |
| R119FL,FR | 244 2043 937 | Metal oxide 10 ohm 1W | |
| R119SL,SR | 244 2043 937 | Metal oxide 10 ohm 1W | |
| R135,136 | 963 0045 203 | Winding 0.1 ohm 5W | |
| R141,142 | 244 2043 982 | Metal oxide 0.22 ohm 1W | |
| R148,149 | 244 2043 982 | Metal oxide 0.22 ohm 1W | |
| R151 | 963 9003 343 | Metal film 68ohm 1/4W | |
| R154 | 963 0043 108 | Metal film 2.2 Mohm 1/2W | |
| R179 | 963 9003 055 | Metal film 47 kohm 1/4W (NB) | |
| R181 | 963 9003 068 | Metal film 4.7 ohm 1/4W (NB) | |
| R184 | 244 2043 937 | Metal oxide 10 ohm 1W | |
| R185 | 963 9003 039 | Metal film 1 ohm 1/4W | |
| R700L,R | 963 9003 372 | Carbon chip 0 ohm 1/16W | |
| R701L,R | 963 9004 290 | Carbon chip 390 ohm 1/16W | |
| R702L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R703L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R704L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R705L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R706L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R707L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R708L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R709L,R | 963 9004 452 | Carbon chip 68 kohm 1/16W | |
| R710L,R | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R711L,R | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R712L,R | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R713L,R | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R714L,R | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R715L,R | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R716L,R | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R717L,R | 963 9004 164 | Carbon chip 150 kohm 1/16W | |
| R718L,R | 963 9004 326 | Carbon chip 47 ohm 1/10W | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R719L,R | 963 9004 258 | Carbon chip 240 ohm 1/10W | |
| R720L,R | 963 9004 148 | Carbon chip 130 kohm 1/16W | |
| R721L,R | 963 9004 106 | Carbon chip 11 kohm 1/10W | |
| R722L,R | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R725L,R | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R726L,R | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R728L,R | 963 9004 300 | Carbon chip 39 kohm 1/16W | |
| R729L,R | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R730L,R | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R731L,R | 963 9004 300 | Carbon chip 39 kohm 1/16W | |
| R732L,R | 963 9004 300 | Carbon chip 39 kohm 1/16W | |
| R737L,R | 963 9004 193 | Carbon chip 22 ohm 1/16W | |
| R751L,R | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| VR101~105 | 960 0091 601 | Semi fixed resistor 1 kohm | |
| **CAPACITORS GROUP** | | | |
| C101C | | Electrolytic 47µF/50V | |
| C101FL,FR | | Electrolytic 47µF/50V | |
| C101SL,SR | | Electrolytic 47µF/50V | |
| C102C | | Electrolytic 10µF/50V | |
| C102FL,FR | | Electrolytic 10µF/50V | |
| C102SL,SR | | Electrolytic 10µF/50V | |
| C103C | 963 9003 084 | Ceramic 100pF/500V | |
| C103FL,FR | 963 9003 084 | Ceramic 100pF/500V | |
| C103SL,SR | 963 9003 084 | Ceramic 100pF/500V | |
| C104C | 963 9003 084 | Ceramic 100pF/500V | |
| C104FL,FR | 963 9003 084 | Ceramic 100pF/500V | |
| C104SL,SR | 963 9003 084 | Ceramic 100pF/500V | |
| C105C | 960 9003 108 | Ceramic 0.022µF/25V | |
| C105FL,FR | 960 9003 108 | Ceramic 0.022µF/25V | |
| C105SL,SR | 960 9003 108 | Ceramic 0.022µF/25V | |
| C107C | 963 9003 097 | Mylar film 0.1µF/250V | |
| C107FL,FR | 963 9003 097 | Mylar film 0.1µF/250V | |
| C107SL,SR | 963 9003 097 | Mylar film 0.1µF/250V | |
| C131~135 | 963 9003 097 | Mylar film 0.1µF/250V | |
| C136,137 | 963 0087 203 | Electrolytic 10000µF/63V | |
| C138 | | Electrolytic 1µF/50V | |
| C141~143 | 963 0021 900 | Mylar film 0.047µF/100V | |
| C144 | 960 9007 201 | Electrolytic 3300µF/10V | |
| C145 | 963 9003 123 | Electrolytic 1000µF/35V | |
| C146 | | Electrolytic 1µF/50V | |
| C148 | | Electrolytic 1µF/50V | |
| C150~C152 | 963 0021 900 | Mylar film 0.047µF/100V | |
| C153 | 963 0021 104 | Electrolytic 6800µF/16V | |
| C154 | | Electrolytic 47µF/10V | |
| C155 | 963 9004 559 | Ceramic 0.1µF/50V | |
| C157 | | Electrolytic 1µF/50V | |
| C158 | 963 9003 136 | Electrolytic 1000µF/25V | |
| C159 | | Electrolytic 1µF/50V | |
| C161 | | Electrolytic 10µF/35V | |
| C171 | | Electrolytic 100µF/10V | |

| Ref. No. | Part No. | Part Name | Remarks | |
|---|---|---|---|---|
| C171A~C | 963 9004 818 | Ceramic 0.1µF/50V | | |
| C172,173 | | Electrolytic 220µF/6.3V | | |
| C174 | | Electrolytic 10µF/35V | | |
| C175 | | Electrolytic 4.7µF/50V | | |
| C176,177 | | Electrolytic 1µF/50V | | |
| C178 | 963 9003 149 | Electrolytic 330µF/63V | | |
| ⚠ C181 | 960 0177 208 | Ceramic 0.047µF/250V(AC) | | |
| C182 | | Electrolytic 10µF/100V | | |
| C251,252 | 963 9004 698 | Ceramic chip 0.01µF/50V | | |
| C709L,R | | Electrolytic 10µF/35V | | |
| C710L,R | 963 9004 685 | Ceramic chip 1000pF/50V | | |
| C711L,R | | Electrolytic 220µF/6.3V | | |
| C712L,R | 963 9004 779 | Mylar film 0.024µF/50V | | |
| C713L,R | 960 9008 695 | Mylar film 0.0068µF/100V | | |
| C714L,R | | Electrolytic 4.7µF/50V | | |
| C715L,R | 963 9004 737 | Ceramic chip 0.022µF/25V | | |
| C716L,R | | Electrolytic 10µF/35V | | |
| C717L,R | 963 9004 601 | Ceramic chip 220pF/50V | | |
| C718L,R | | Electrolytic 47µF/10V | | |
| C719L,R | | Electrolytic 1µF/50V | | |
| C720L,R | 963 9003 152 | Mylar film 0.068µF/100V | | |
| C721L,R | 963 9003 152 | Mylar film 0.068µF/100V | | |
| C723L,R | | Electrolytic 10µF/35V | | |
| C724L,R | 963 9004 698 | Ceramic chip 0.01µF/50V | | |
| C725,726 | 963 9004 698 | Ceramic chip 0.01µF/50V | | |
| C727,728 | | Electrolytic 10µF/35V | | |
| **OTHER PARTS GROUP** | | | | **Q'ty** |
| CN201 | 963 0085 506 | 9P connector socket (TUC-P) | | 1 |
| CN202 | 963 0085 603 | 5P connector socket (TUC-P) | | 1 |
| CN203 | 963 0085 700 | 6P connector socket (TUC-P) | | 1 |
| CN701 | 963 0086 602 | 12P connector socket (TUC-P) | | 1 |
| CN702 | 963 0086 709 | 11P connector socket (TUC-P) | | 1 |
| CN704 | 963 0086 505 | 7P connector socket (TUC-P) | | 1 |
| CP101 | 960 0197 505 | 2P connector base | | 1 |
| CP102 | 960 0123 304 | 2P connector base | | 1 |
| CP103 | 960 0128 901 | 3P connector base | | 1 |
| CP104 | 960 0128 804 | 6P connector base | | 1 |
| CP106 | 960 0123 207 | 3P connector base | | 1 |
| CP501 | 963 0086 806 | 9P connector base (TUC-P) | | 1 |
| CP502~504 | 963 0086 903 | 5P connector base (TUC-P) | | 4 |
| CP505 | 963 0087 009 | 6P connector base (TUC-P) | | 1 |
| CP553 | 963 0087 106 | 20P connector base (TUC-P) | | 1 |
| CP901 | 963 0048 909 | 3P connector base | | 1 |
| ⚠ F101,102 | 960 0188 705 | Fuse 8A | E3 | 2 |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| ⚠ F101 | 960 0142 602 | Fuse 2.5A | E2 | 1 |
| ⚠ F102 | 960 0044 709 | Fuse 3.15A | E2,E1C | 1 |
| ⚠ F101A,B | 960 0005 804 | Fuse clip | E3,E2 | 2 |
| ⚠ F102A,B | 960 0005 804 | Fuse clip | E3,E2,E1C | 2 |
| GND101,102 | 960 9006 600 | Terminal |  | 2 |
| JK103 | 960 0194 809 | 2P speaker terminal |  | 1 |
| ⚠ JK104 | 960 0187 803 | AC outlet(2P) | E3 | 1 |
| L101C | 963 0049 005 | Inductor 0.5µH |  | 1 |
| L101FL,FR | 963 0049 005 | Inductor 0.5µH |  | 2 |
| L101SL,SR | 963 0049 005 | Inductor 0.5µH |  | 2 |
| L701L,R | 235 9003 002 | FTZ CHOKE COIL | E2 | 2 |
| RLY101~104 | 960 0181 702 | Relay (G5PA-28 24V) |  | 4 |
| RLY105 | 963 0071 303 | Relay (RSB24S 24V) |  | 1 |
| RLY106 | 960 0181 605 | Relay (G5PA-1-8 12V) |  | 1 |
| TP101~105 | 960 0161 405 | 3P connector base |  | 5 |
| — | — | Heat sink |  | 1 |
| — | — | Heat sink |  | 1 |
| ⚠ — | 960 0185 708 | Power trans. (Mini) | E3 | 1 |
| ⚠ | 960 0185 711 | Power trans. (Mini) | E2 | 1 |
| ⚠ | 960 0185 737 | Power trans. (Mini) | E1,E1H,E1T | 1 |
| ⚠ | 960 0185 724 | Power trans. (Mini) | E1C | 1 |
| — | 963 0018 007 | Screw (2S 3×8 ZNY/BH) |  | 3 |
| — | 960 0188 608 | 4P speaker terminal |  | 1 |
| — | 963 0074 009 | 8P speaker terminal |  | 1 |
| — | 960 0188 103 | 2P pin jack |  | 1 |
| — | 960 0188 200 | 4P pin jack |  | 2 |
| — | 960 0188 307 | 6P pin jack |  | 1 |
| — | 963 0066 114 | 5P connector base |  | 1 |
| — | 963 0075 600 | 6P connector base |  | 1 |
| — | 963 0068 400 | Capacitor cover | E2 | 1 |

## PROCESSOR P.W.B. ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** |  |  |  |
| IC201 | 963 0084 303 | IC CXP740096-135Q |  |
| IC202 | 963 0057 602 | IC TDA7330BD | E2 |
| IC203 | 960 0080 201 | IC KIC9164AN |  |
| IC204 | 963 0043 603 | IC KIC9482F |  |
| IC205~210 | 960 0174 502 | IC NJM2068DD |  |
| IC301 | 960 0180 004 | IC LC75721E |  |
| IC302 | 963 0074 504 | IC BU2090F |  |
| IC803 | 269 0186 002 | IC GP1FA502RZ |  |
| RMC301 | 960 0181 100 | IC NJL64H380A |  |
| Q201 | 269 0054 901 | Transistor DTC144EK |  |
| Q202 | 963 0045 902 | Transistor 2SC2412KT |  |
| Q207,208 | 960 0196 807 | Transistor 2SK117Y |  |
| Q209 | 269 0093 904 | Transistor DTA144ES |  |
| Q210 | 269 0040 902 | Transistor DTC144ES |  |
| Q211~213 | 960 0196 807 | Transistor 2SK117Y |  |
| Q214 | 269 0046 906 | Transistor DTA114ES |  |
| Q215 | 269 0020 906 | Transistor DTC114ES |  |
| Q216 | 269 0046 906 | Transistor DTA114ES |  |
| Q300,301 | 269 0055 900 | Transistor DTA144EK |  |
| Q302~304 | 269 0054 901 | Transistor DTC144EK |  |
| Q305 | 269 0055 900 | Transistor DTA144EK |  |
| D201 | 960 0197 000 | Diode KDS160 |  |
| D202 | 963 0058 407 | Diode IN4007 |  |
| D203 | 963 0020 309 | Diode 1SS133T |  |
| D204,205 | 960 0197 000 | Diode KDS160 |  |
| D206 | 960 0197 000 | Diode KDS160 | E2 |
| D207 | 960 0197 000 | Diode KDS160 |  |
| D210~212 | 960 0197 000 | Diode KDS160 |  |
| D213 | 963 0020 309 | Diode 1SS133T |  |
| D214 | 963 0058 407 | Diode IN4007 |  |
| D302~304 | 963 0020 309 | Diode 1SS133T |  |
| D305~307 | 960 0197 000 | Diode KDS160 |  |
| ZD201 | 963 0047 502 | Zener diode MTZJ3.3B |  |
| ZD301 | 960 0095 801 | Zener diode MTZJ6.8B |  |
| ZD302~305 | 960 0095 607 | Zener diode MTZJ5.6B |  |
| LED301,302 | 960 0197 204 | LED PI5-RD/HL50RDRF4T |  |
| LED304~309 | 960 0197 204 | LED PI5-RD/HL50RDRF4T |  |
| **RESISTORS GROUP** |  |  |  |
| R202 | 963 9003 398 | Carbon chip 1 kohm 1/16W |  |
| R204 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W |  |
| R205 | 963 9004 070 | Carbon chip 10 kohm 1/16W |  |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R206 | 963 9004 232 | Carbon chip 220 kohm 1/16W | |
| R208 | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R209 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R210FL,FR | 963 9004 313 | Carbon chip 4.3 kohm 1/16W | |
| R211 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R212 | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R213FR | 963 9004 151 | Carbon chip 15 kohm 1/16W | |
| R214FL,FR | 963 9004 151 | Carbon chip 15 kohm 1/16W | |
| R215FL,FR | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R216 | 963 9004 070 | Carbon chip 10 kohm 1/16W | E3,E2 |
| R216FL,FR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R217 | 963 9004 151 | Carbon chip 15 kohm 1/16W | |
| R217FL,FR | 963 9004 410 | Carbon chip 6.2 kohm 1/16W | |
| R218 | 963 9004 070 | Carbon chip 10 kohm 1/16W | E2,E1,E1C,E1H,E1T |
| R219,220 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R223,224 | 963 9004 070 | Carbon chip 10 kohm 1/16W | E2 |
| R220SW | 963 9004 481 | Carbon chip 8.2 kohm 1/16W | |
| R221SW | 963 9004 287 | Carbon chip 3.6 kohm 1/10W | |
| R222SW | 963 9004 481 | Carbon chip 8.2 kohm 1/16W | |
| R223,224 | 963 9003 372 | Carbon chip 0 ohm 1/16W | |
| R223SW | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R224SW | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R225 | 963 9004 245 | Carbon chip 2.2Mohm 1/16W | E2 |
| R229,230 | 960 9003 807 | Metal film 100 ohm 1/4W | |
| R237 | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R239C | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R239FL,FR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R239SL,SR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R239SW | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R240C | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R240FL,FR | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R240SL,SR | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R240SW | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R241C | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R241FL,FR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R241SL,SR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R241SW | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R242C | 963 9004 478 | Carbon chip 7.5 kohm 1/10W | |
| R242FL,FR | 963 9004 478 | Carbon chip 7.5 kohm 1/10W | |
| R242SL,SR | 963 9004 478 | Carbon chip 7.5 kohm 1/10W | |
| R242SW | 963 9004 449 | Carbon chip 6.8 kohm 1/16W | |
| R243C | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R243FL,FR | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R244C | 963 9004 135 | Carbon chip 1.3 kohm 1/10W | |
| R244FL,FR | 963 9004 135 | Carbon chip 1.3 kohm 1/10W | |
| R244SL,SR | 963 9004 135 | Carbon chip 1.3 kohm 1/10W | |
| R244SW | 963 9004 407 | Carbon chip 620 ohm 1/16W | |
| R246C | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R246SL,SR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R246SW | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R247C | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R247SL,SR | 963 9004 339 | Carbon chip 470 ohm 1/16W | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R247SW | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R250 | 963 9004 368 | Carbon chip 470 kohm 1/16W | |
| R255 | 963 9004 368 | Carbon chip 470 kohm 1/16W | |
| R261 | 963 9004 122 | Carbon chip 12 kohm 1/16W | |
| R262 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R263,264 | 963 9004 122 | Carbon chip 12 kohm 1/16W | |
| R265~271 | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R336 | 963 9004 465 | Carbon chip 75 ohm 1/16W | |
| R337 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R338 | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R339 | 963 9004 119 | Carbon chip 1.2 kohm 1/16W | |
| R340~348 | 963 9004 436 | Carbon chip 680 ohm 1/16W | |
| R349 | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R349FL~402FL | 963 9004 397 | Carbon chip 56 kohm 1/16W | |
| R350,351 | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R407 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| **CAPACITORS GROUP** | | | |
| BC201 | 963 0061 504 | Electrolytic 8200µF/5.5V | |
| C202,203 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C204 | | Electrolytic 4.7µF/50V | |
| C206 | | Electrolytic 47µF/16V | E2 |
| C207 | 963 9004 546 | Ceramic 0.01µF/16V | E2 |
| C208 | 963 9004 805 | Ceramic 270pF/50V | E2 |
| C209 | | Electrolytic 10µF/35V | E2 |
| C210 | 963 9004 698 | Ceramic chip 0.01µF/50V | E2 |
| C211 | 963 9004 614 | Ceramic chip 27pF/50V | E2 |
| C211SW | 963 9004 575 | Ceramic chip 100pF/50V | |
| C212 | 963 9004 614 | Ceramic chip 27pF/50V | E2 |
| C212SW | 963 9004 643 | Ceramic chip 47pF/50V | |
| C213-219 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C213FL,FR | 963 9004 575 | Ceramic chip 100pF/50V | |
| C218FL,FR | 963 9004 627 | Ceramic chip 33pF/50V | |
| C219FL,FR | | Electrolytic 10µF/35V | |
| C219SW,220 | | Electrolytic 10µF/35V | |
| C221FL,FR | | Electrolytic 4.7µF/50V | |
| C222SW | | Electrolytic 4.7µF/50V | |
| C223SL,SR | | Electrolytic 4.7µF/50V | |
| C225,226 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C227 | | Electrolytic 10µF/35V | |
| C228-C234 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C230C,231C | | Electrolytic 4.7µF/50V | |
| C231FL,FR | | Electrolytic 10µF/35V | |
| C231SL,SR | | Electrolytic 4.7µF/50V | |
| C231SW | | Electrolytic 4.7µF/50V | |
| C232C | 963 9004 669 | Ceramic chip 56pF/50V | |
| C232FL,FR | 963 9004 669 | Ceramic chip 56pF/50V | |
| C232SL,SR | 963 9004 630 | Ceramic chip 39pF/50V | |
| C232SW | 963 9004 669 | Ceramic chip 56pF/50V | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C233C | 963 9004 724 | Ceramic chip 2200pF/50V | |
| C233FL,FR | 963 9004 724 | Ceramic chip 2200pF/50V | |
| C234FL,FR | 963 9004 672 | Ceramic chip 680pF/50V | |
| C235SW | 963 9004 575 | Ceramic chip 100pF/50V | |
| C236 | | Electrolytic 4.7µF/50V | |
| C237 | | Electrolytic 0.1µF/50V | |
| C239 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C240 | | Electrolytic 1µF/50V | |
| C241 | | Electrolytic 10µF/35V | |
| C242 | 963 9004 588 | Ceramic chip 100pF/50V | |
| C243,244 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C243C | 963 9004 672 | Ceramic chip 680pF/50V | |
| C245 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C246 | | Electrolytic 10µF/35V | |
| C246SW | | Electrolytic 4.7µF/50V | |
| C247 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C248 | 963 9004 588 | Ceramic chip 1000pF/50V | |
| C249 | 960 9003 108 | Ceramic 0.022µF/25V | |
| C250 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C301-304 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C305-307 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C309 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C311 | 963 9004 494 | Ceramic 30pF/50V | |
| C312 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C313 | 963 9004 504 | Ceramic 0.01µF/50V | |
| C314 | 963 0021 900 | Mylar film 0.047µF/100V | |
| C315 | | Electrolytic 1µF/50V | |
| C316 | | Electrolytic 10µF/50V | |
| C317 | | Electrolytic 47µF/10V | |
| C318 | 963 0021 900 | Mylar film 0.047µF/100V | |
| C319 | | Electrolytic 10µF/35V | |
| C320 | | Electrolytic 1µF/50V | |
| C321 | 963 0021 900 | Mylar film 0.047µF/100V | |
| C322 | | Electrolytic 47µF/10V | |
| C323 | 963 9004 766 | Mylar film 0.1µF/100V | |
| C324 | | Electrolytic 1µF/50V | |
| C325 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C326 | | Electrolytic 4.7µF/50V | |
| C327 | | Electrolytic 1µF/50V | |
| C328 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C3010 | | Electrolytic 47µF/10V | |
| C3020 | 963 9004 818 | Ceramic 0.1µF/50V | |
| C3030 | 963 9004 591 | Ceramic chip 22pF/50V | |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| **OTHER PARTS GROUP** | | | | |
| CB201,202 | 963 0053 800 | BEADS INDUCTOR | | 2 |
| CN301 | 960 0197 602 | 17P FFC connector base | | 1 |
| CN302 | 963 0087 300 | 3P connector cord | | 1 |
| CP301 | 960 0197 709 | 17P FFC connector base | | 1 |
| CP301 | 963 0049 102 | 3P connector base | | 1 |
| CP401 | 963 0087 407 | 16P connector base (TUC-P) | | 1 |
| CP551 | 963 0087 504 | 19P connector base (TUC-P) | | 1 |
| CP552 | 963 0087 601 | 18P connector base (TUC-P) | | 1 |
| CP601,602 | 963 0086 903 | 5P connector base (TUC-P) | | 2 |
| CP603 | 963 0087 009 | 6P connector base (TUC-P) | | 1 |
| CP605 | 963 0086 806 | 9P connector base (TUC-P) | | 1 |
| CP701 | 963 0087 708 | 12P connector base (TUC-P) | | 1 |
| CP702 | 963 0087 805 | 11P connector base (TUC-P) | | 1 |
| CP801,802 | 963 0087 902 | 17P connector base (TUC-P) | | 2 |
| CP803 | 963 0088 008 | 10P connector base (TUC-P) | | 1 |
| CP901 | 963 0060 806 | 11P connector base | | 1 |
| GP301 | 963 0088 202 | 1P contact Ass'y | | 1 |
| GP303 | 963 0088 202 | 1P contact Ass'y | | 1 |
| J324,325 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 2 |
| J326 | 963 9003 372 | Carbon chip 0 ohm 1/16W | | 1 |
| J340 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 1 |
| J342,343 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 2 |
| JK301 | 963 0067 508 | 3P pin jack | | 1 |
| JP301 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 1 |
| L301 | 960 0010 307 | Inductor 10µH | | 1 |
| L302 | 960 0128 008 | Inductor 100µH | | 1 |
| L3010 | 963 0050 803 | Inductor 4.7µH | | 1 |
| SW301~322 | 963 0045 708 | Tact switch | | 22 |
| VEC301,302 | 960 0181 207 | Rotary encoder | | 2 |
| X201 | 960 0181 003 | Resonator CST12.0MTW-TF01 | | 1 |
| X202 | 960 0091 805 | Crystal 4.332MHz | E2 | 1 |
| — | 960 0184 408 | FLT holder | | 1 |
| — | 960 0180 509 | FLT (16-ST-42GNK) | | 1 |

## CNT P.W.B. ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC401 | 963 0043 700 | IC LC72131 | |
| IC402 | 963 0043 904 | IC LA1266 | |
| IC403 | 963 0044 000 | IC LA3401 | |
| IC551 | 960 0174 502 | IC NJM2068DD | |
| IC552 | 963 0043 506 | IC TC9184AP | |
| IC601 | 963 0083 304 | IC BA7626 | |
| IC602 | 963 0074 504 | IC BU2090F | |
| IC651,652 | 963 0083 304 | IC BA7626 | |
| IC663 | 963 0057 806 | IC KIA78R05PI | |
| Q401 | 960 0189 102 | Transistor KTC3880S-O | |
| Q402~404 | 269 0083 901 | Transistor DTA114EK | |
| Q405,406 | 960 0196 603 | Transistor KTC2874B | |
| Q407 | 963 0024 208 | Transistor DTC114YK | |
| Q408 | 269 0083 901 | Transistor DTA114EK | |
| Q409 | 960 0189 102 | Transistor KTC3880S-O | E2 |
| Q551 | 960 0196 700 | Transistor KTC3200BL | |
| Q551SW,552SW | 960 0196 603 | Transistor KTC2874B | |
| Q552 | 960 0196 302 | Transistor KTA1268BL | |
| Q553~555 | 269 0046 906 | Transistor DTA114ES | |
| Q553T | 960 0196 904 | Transistor DTC114YS (NPN) | |
| Q601~603 | 960 0005 105 | Transistor KTA1266Y | |
| Q604~606 | 963 0075 406 | Transistor DTC114TS | |
| Q651~656 | 960 0005 105 | Transistor KTA1266Y | |
| D403 | 960 0197 000 | Diode KDS160 | |
| D404~406 | 963 0020 309 | Diode 1SS133T | |
| D551,551T | 963 0020 309 | Diode 1SS133T | |
| D552-561 | 963 0020 309 | Diode 1SS133T | |
| D562,563 | 963 0058 407 | Diode IN4007 | |
| D564 | 960 0095 500 | Zener diode MTZJ5.1B | |
| D565 | 963 0020 309 | Diode 1SS133T | |
| D601~606 | 960 0197 000 | Diode KDS160 | |
| D651~D656 | 960 0197 000 | Diode KDS160 | |
| D652T | 963 0061 601 | Electrolytic 3300µF/10V | |
| D657,658 | 963 0058 407 | Diode IN4007 | |
| D901,902 | 960 0197 000 | Diode KDS160 | |
| ZD401 | 960 0095 500 | Zener diode MTZJ5.1B | |
| **RESISTORS GROUP** | | | |
| R401 | 963 9004 821 | Carbon chip 10 ohm 1/16W | |
| R403 | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R404 | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R405 | 960 9003 807 | Metal film 100 ohm 1/4W | |
| R406 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R407 | 963 9004 407 | Carbon chip 620 ohm 1/16W | E3,E1,E1C,E1H,E1T |
| R407 | 963 9004 436 | Carbon chip 680 ohm 1/16W | E2 |
| R408 | 963 9004 119 | Carbon chip 1.2 kohm 1/16W | E3,E1,E1C,E1H,E1T |
| R408 | 963 9004 436 | Carbon chip 680 ohm 1/16W | E2 |
| R409 | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R411 | 963 9004 452 | Carbon chip 68 kohm 1/16W | |
| R412 | 963 9004 834 | Carbon chip 5.6 kohm 1/16W | |
| R413 | 960 9006 503 | Metal film 220ohm 1/4W | |
| R414 | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | |
| R415 | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R416 | 241 2379 945 | Metal film 680 ohm 1/4W | |
| R417 | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R418 | 963 9004 274 | Carbon chip 33 kohm 1/16W | |
| R420 | 963 9003 372 | Carbon chip 0 ohm 1/16W | |
| R426,427 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R428 | 963 9004 847 | Carbon chip 3.3 kohm 1/16W | E3 |
| R428 | 963 9004 070 | Carbon chip 10 kohm 1/16W | E2 |
| R428 | 963 9004 449 | Carbon chip6.8 kohm 1/16W | E1,E1C,E1H,E1T |
| R429 | 963 9004 850 | Carbon chip 82 ohm 1/16W | |
| R430 | 960 9003 807 | Metal film 100 ohm 1/4W | |
| R431 | 963 9004 371 | Carbon chip 5.1 kohm 1/16W | |
| R432 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R434 | 960 9003 807 | Metal film 100 ohm 1/4W | |
| R435 | 963 9004 847 | Carbon chip 3.3 kohm 1/16W | |
| R437 | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R438,439 | 963 9004 083 | Carbon chip 100 kohm 1/16W | E3,E2,E1,E1C,E1H,E1T |
| R438,439 | 963 9004 164 | Carbon chip 150 kohm 1/16W | E2 |
| R440,441 | 963 9004 863 | Carbon chip 120 kohm 1/16W | E3,E2,E1,E1C,E1H,E1T |
| R440,441 | 963 9004 232 | Carbon chip 220 kohm 1/16W | E2 |
| R442,443 | 963 9004 847 | Carbon chip 3.3 kohm 1/16W | E3,E2,E1,E1C,E1H,E1T |
| R442,443 | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | E2 |
| R444,445 | 963 9004 481 | Carbon chip 8.2 kohm 1/16W | E3,E2,E1,E1C,E1H,E1T |
| R444,445 | 963 9004 847 | Carbon chip 3.3 kohm 1/16W | E2 |
| R448 | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | |
| R449 | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | E2 |
| R450 | 963 9003 398 | Carbon chip 1 kohm 1/16W | E2 |
| R455 | 963 9004 876 | Carbon chip 330 ohm 1/16W | |
| R456 | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R458,459 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R460,461 | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R462~465 | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R467,468 | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R470 | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R471VT | 963 9004 203 | Carbon chip 220 ohm 1/16W | |
| R474 | 963 9004 889 | Carbon chip 180 ohm 1/16W | E3,E2 |
| R475 | 963 9004 122 | Carbon chip 12 kohm 1/16W | |
| R476 | 963 9004 397 | Carbon chip 56 kohm 1/16W | |
| R478 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R479 | 963 9004 083 | Carbon chip 100 kohm 1/16W | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R551SW,552SW | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R553FL,FR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R553SW | 963 9004 229 | Carbon chip 22 kohm 1/16W | |
| R553T | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R554SW | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R554T | 244 2052 928 | Metal film 47 ohm 1W | |
| R558FL,FR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R559 | 244 2055 996 | Metal film 1.2 kohm 1W | |
| R559FL,FR | 963 9004 229 | Carbon chip 22 kohm 1/16W | |
| R560FL,FR | 963 9004 384 | Carbon chip 510 kohm 1/16W | |
| R561FL,FR | 963 9004 274 | Carbon chip 33 kohm 1/16W | |
| R563FL,FR | 963 9004 290 | Carbon chip 390 ohm 1/16W | |
| R564FL,FR | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R565 | 244 2055 996 | Metal film 1.2 kohm 1W | |
| R567FL,FR | 963 9004 368 | Carbon chip 470 kohm 1/16W | |
| R570 | 244 2055 996 | Metal film 1.2 kohm 1W | |
| | | | |
| R629 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R633-636 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R638,639 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R651-658 | 963 9004 465 | Carbon chip 75 ohm 1/16W | |
| R651T,652T | 244 2043 982 | Metal oxide 0.22 ohm 1W | |
| R659 | 963 9004 423 | Carbon chip 68 ohm 1/10W | |
| R660 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R662 | 963 9004 423 | Carbon chip 68 ohm 1/10W | |
| R663 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R665 | 963 9004 423 | Carbon chip 68 ohm 1/10W | |
| R666 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R671 | 963 9004 423 | Carbon chip 68 ohm 1/10W | |
| R672 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R674 | 963 9004 423 | Carbon chip 68 ohm 1/10W | |
| R675 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R677 | 963 9004 423 | Carbon chip 68 ohm 1/10W | |
| R678 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R683,684 | 963 9004 465 | Carbon chip 75 ohm 1/16W | |
| | | | |
| R901,902 | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R903H,904H | 960 9009 270 | Metal film 470ohm 2W | |
| R905,906 | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R907,908 | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R909,910 | 963 9004 245 | Carbon chip 2.2 Mohm 1/16W | |
| R911,912 | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R913,914 | 963 9004 203 | Carbon chip 220 ohm 1/16W | |
| R916 | 963 9004 203 | Carbon chip 220 ohm 1/16W | |
| R917~920 | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R923,924 | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| | | | |
| VR401 | 960 0096 606 | Semi fixed resistor 20kohm | |
| VR402 | 960 0096 402 | Semi fixed resistor 100kohm | |
| VR403 | 963 0052 005 | Semi fixed resistor 200kohm | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **CAPACITORS GROUP** | | | |
| C401,402 | 963 9004 685 | Ceramic chip 1000pF/50V | |
| C403 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C404 | 963 9004 892 | Ceramic 2pF/50V | |
| C405 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C406 | 963 9004 902 | Ceramic chip 18pF/50V | |
| C408 | 960 9004 709 | Ceramic 6pF/50V | |
| C409 | 963 9004 520 | Ceramic 100pF/50V | |
| C410 | 963 9004 915 | Ceramic 470pF/50V | |
| C411 | 963 9004 685 | Ceramic chip 1000pF/50V | |
| C412 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C413 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C414 | | Electrolytic 2.2µF/50V | |
| C415 | | Electrolytic 47µF/16V | |
| C416 | | Electrolytic 10µF/35V | |
| C417 | | Electrolytic 100µF/16V | |
| C418 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C419 | | Electrolytic 10µF/35V | |
| C420 | 963 9004 591 | Ceramic chip 22pF/50V | |
| C421 | 963 9004 928 | Ceramic chip 24pF/50V | |
| C423,424 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C425 | | Electrolytic 4.7µF/50V | |
| C426 | | Electrolytic 3.3µF/50V | |
| C427 | | Electrolytic 4.7µF/50V | |
| C428 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C430 | 963 0021 900 | Mylar film 0.047µF/100V | |
| C431 | 963 9004 627 | Ceramic chip 33pF/50V | |
| C432 | | Electrolytic 47µF/16V | |
| C433 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C434 | | Electrolytic 1µF/50V | E3 |
| C434 | | Electrolytic 0.33µF/50V | E2,E1,E1C,E1H,E1T |
| C435,436 | 963 9004 737 | Ceramic chip 0.022µF/25V | |
| C437 | | Electrolytic 47µF/16V | |
| C438 | | Electrolytic 1µF/50V | |
| C439 | | Electrolytic 0.22µF/50V | |
| C440,441 | | Electrolytic 1µF/50V | |
| C442 | | Electrolytic 2.2µF/50V | |
| C443 | | Electrolytic 10µF/35V | |
| C444 | | Electrolytic 4.7µF/50V | |
| C445 | | Electrolytic 10µF/35V | |
| C446,447 | 963 9004 940 | Ceramic 270pF/50V | E3 |
| C446,447 | 963 9004 957 | Ceramic 330pF/50V | E2 |
| C446,447 | 963 9004 931 | Ceramic 180pF/50V | E1,E1C,E1H,E1T |
| C448,449 | 963 9004 960 | Ceramic 470pF/50V | |
| C448,449 | 963 9004 957 | Ceramic 330pF/50V | E1,E1C,E1H,E1T |
| C450,451 | | Electrolytic 10µF/35V | |
| C452 | | Electrolytic 100µF/16V | |
| C453 | 963 9004 614 | Ceramic chip 27pF/50V | |
| C456 | 963 9004 672 | Ceramic chip 680pF/50V | |
| C457~460 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C461 | 963 9004 591 | Ceramic chip 22pF/50V | |
| C462 | 963 9004 656 | Ceramic chip 470pF/50V | E2 |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C463 | 963 9004 782 | Mylar film 0.056µF/100V | |
| C464 | 963 9004 973 | Ceramic 3pF/50V | |
| C471VT | | Electrolytic 1µF/50V | |
| C472VT | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C551 | | Electrolytic 2.2µF/50V | |
| C551M | | Electrolytic 100µF/35V | |
| C551S | 963 9004 562 | Ceramic 0.047µF/50V | |
| C551T,552T | | Electrolytic 100µF/16V | |
| C552-554 | | Electrolytic 0.1µF/50V | |
| C552FL,FR | | Electrolytic 10µF/35V | |
| C553FL,FR | 963 9004 575 | Ceramic chip 100pF/50V | |
| C553T,554T | 963 9004 708 | Ceramic chip 0.1µF/50V | |
| C554FL,FR | | Electrolytic 10µF/35V | |
| C555,556 | 963 9004 546 | Ceramic 0.01µF/16V | |
| C555FL,FR | 963 9004 643 | Ceramic chip 47pF/50V | |
| C556FL,FR | | Electrolytic 10µF/35V | |
| C557 | | Electrolytic 10µF/35V | |
| C557FL,FR | 963 0024 703 | Mylar film 0.01µF/100V | |
| C558FL,FR | 963 9004 782 | Mylar film 0.056µF/100V | |
| C559FL,FR | 963 9008 640 | Mylar film 0.022µF/100V | |
| C560FL,FR | 960 9008 611 | Mylar film 0.0033µF/100V | |
| C561FL,FR | 960 9008 695 | Mylar film 0.0068µF/100V | |
| C601~604 | | Electrolytic 4.7µF/50V | |
| C605 | | Electrolytic 470µF/6.3V | |
| C606,607 | | Electrolytic 10µF/35V | |
| C608,609 | | Electrolytic 470µF/6.3V | |
| C610 | | Electrolytic 10µF/35V | |
| C612 | | Electrolytic 100µF/16V | |
| C614 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C651~658 | | Electrolytic 4.7µF/50V | |
| C651T | 963 0021 900 | Mylar film 0.047µF/100V | |
| C659 | | Electrolytic 470µF/6.3V | |
| C660 | | Electrolytic 10µF/50V | |
| C661 | | Electrolytic 470µF/6.3V | |
| C662 | | Electrolytic 10µF/50V | |
| C663 | | Electrolytic 470µF/6.3V | |
| C664 | | Electrolytic 10µF/50V | |
| C665 | | Electrolytic 100µF/10V | |
| C666 | | Electrolytic 470µF/6.3V | |
| C667 | | Electrolytic 10µF/50V | |
| C668 | | Electrolytic 470µF/6.3V | |
| C669 | | Electrolytic 10µF/50V | |
| C670 | | Electrolytic 470µF/6.3V | |
| C671 | | Electrolytic 10µF/50V | |
| C672 | | Electrolytic 100µF/10V | |
| C673,674 | | Electrolytic 1µF/50V | |
| C676,677 | 963 9004 753 | Ceramic chip 0.047µF/50V | |
| C680 | | Electrolytic 1µF/50V | |
| C681,682 | 963 9004 520 | Ceramic 100pF/50V | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C901H,902H | 963 9004 533 | Ceramic 0.001µF/50V | |
| C903 | 963 9004 575 | Ceramic chip 1000pF/50V | |
| C903H | | Electrolytic 1µF/50V | |
| C904H | 960 9003 108 | Ceramic 0.022µF/25V | |
| C905,906 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C907~910 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C911 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C918 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C921,922 | 963 9004 575 | Ceramic chip 100pF/50V | |
| C924 | 963 9004 575 | Ceramic chip 100pF/50V | |

| OTHER PARTS GROUP | | | | Q'ty |
|---|---|---|---|---|
| CF401,402 | 960 0187 104 | Ceramic filter SFE10.7MA8 | E3 | 2 |
| CF401,402 | 960 0177 509 | Ceramic filter SFE10.7MS3GH | E2 | 2 |
| CF401 | 960 0187 104 | Ceramic filter SFE10.7MA8 | E1,E1C,E1H,E1T | 1 |
| CF402 | 960 0177 509 | Ceramic filter SFE10.7MS3GH | E1,E1C,E1H,E1T | 1 |
| CF403 | 960 0187 609 | Ceramic resonator | | 1 |
| CN392 | 963 0086 000 | 2P connector cord | | 1 |
| CN401 | 963 0086 107 | 16P connector socket (TUC-P) | | 1 |
| CN506 | 963 0059 008 | 8P connector cord | | 1 |
| CN551 | 963 0086 204 | 19P connector socket (TUC-P) | | 1 |
| CN552 | 963 0086 301 | 18P connector socket (TUC-P) | | 1 |
| CN553 | 963 0086 408 | 20P connector socket (TUC-P) | | 1 |
| CN601 | 963 0085 603 | 5P connector socket (TUC-P) | | 1 |
| CN704 | 963 0086 505 | 7P connector socket (TUC-P) | | 1 |
| CP302 | 963 0049 908 | 3P connector base | | 1 |
| CP392 | 963 0048 909 | 3P connector base | | 1 |
| CP602 | 963 0085 904 | 9P connector cord | | 1 |
| CP603 | 960 0123 207 | 3P connector base | | 1 |
| CP703,704 | 963 0085 807 | 7P connector base (TUC-P) | | 2 |
| FE401 | 960 0187 706 | Front end | | 1 |
| G401 | 963 0088 202 | 1P contact Ass'y | | 1 |
| G901 | 963 0088 202 | 1P contact Ass'y | | 1 |
| J402 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 1 |
| J404 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 1 |
| J407 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 1 |
| J583,584 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 2 |
| J585,586 | 963 9003 372 | Carbon chip 0 ohm 1/16W | | 2 |
| J587 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 1 |
| J655 | 963 9003 369 | Carbon chip 0 ohm 1/8W | | 1 |
| L401 | 963 0052 102 | Inductor 1µH | | 1 |
| L402 | 960 0010 307 | Inductor 10µH | | 1 |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| L403 | 963 0056 409 | MW IF COIL RBW07VB-K5025 BLK | | 1 |
| RELAY551 | 963 0083 100 | Relay (RSB12S DC12V) | | 1 |
| SW391-399 | 963 0045 708 | Tact switch | | 9 |
| SW401 | 963 0056 700 | SW,SLIDE | | 1 |
| SW901 | 960 0176 209 | Push switch | E3 | 1 |
| SW901 | 963 0056 603 | Push switch | E2,E1,E1C,E1H,E1T | 1 |
| T401 | 960 0186 600 | MW IF COIL PCFMAF-270 | | 1 |
| T402 | 960 0007 349 | FM DET TRANS | | 1 |
| T403 | 960 0007 352 | FM DET TRANS | | 1 |
| T404,405 | 960 0071 207 | MPX filter | E2 | 2 |
| T406 | 960 0037 607 | Antibirdie filter | E2 | 1 |
| X401 | 960 0187 405 | Crystal 7.2 MHz | | 1 |
| X402 | 963 0043 302 | Resonator CSB456F11 | | 1 |
| — | 960 0184 000 | Screw bracket | | 2 |
| — | 963 0054 003 | Shield tuner pack | | 1 |
| — | — | Plate | | 1 |
| — | 963 0052 403 | 3P antenna terminal | | 1 |
| — | 960 0188 307 | 6P pin jack | | 1 |
| — | 963 0061 708 | Plate | | 1 |
| — | 963 0057 000 | 1P pin jack | | 1 |
| — | 960 0188 200 | 4P pin jack | | 1 |
| — | 960 0188 404 | 3P pin jack | | 2 |
| — | — | Heat sink | | 1 |
| — | 963 0018 007 | Screw (2S 3×8 ZNY/BH) | | 1 |
| — | 960 0181 304 | 3P S terminal | | 1 |
| — | 960 0181 401 | 4P S terminal | | 2 |
| — | 960 0188 200 | 4P pin jack | | 1 |
| — | 960 0187 502 | Head phone jack (D6.5) | | 1 |
| — | — | Wire clamp | | 2 |

## PRE-AMP P.W.B. ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| Q501C | 960 0196 603 | Transistor KTC2874B | |
| Q501FL,FR | 960 0196 603 | Transistor KTC2874B | |
| Q501M | 960 0196 603 | Transistor KTC2874B | |
| Q501SL,SR | 960 0196 603 | Transistor KTC2874B | |
| Q502C | 960 0196 205 | Transistor KSA992F | |
| Q502FL,FR | 960 0196 205 | Transistor KSA992F | |
| Q502M,503M | 960 0196 603 | Transistor KTC2874B | |
| Q502SL,SR | 960 0196 205 | Transistor KSA992F | |
| Q503C | 960 0196 205 | Transistor KSA992F | |
| Q503FL,FR | 960 0196 205 | Transistor KSA992F | |
| Q503SL,SR | 960 0196 205 | Transistor KSA992F | |
| Q504C | 960 0196 506 | Transistor KSC1845F | |
| Q504FL,FR | 960 0196 506 | Transistor KSC1845F | |
| Q504SL,SR | 960 0196 506 | Transistor KSC1845F | |
| **RESISTORS GROUP** | | | |
| R509C | 960 9005 902 | Metal film 1.2 kohm 1/4W | |
| R509FL,FR | 960 9005 902 | Metal film 1.2 kohm 1/4W | |
| R509SL,SR | 960 9005 902 | Metal film 1.2 kohm 1/4W | |
| R511C | 960 9004 301 | Metal film 47 ohm 1/4W | |
| R511FL,FR | 960 9004 301 | Metal film 47 ohm 1/4W | |
| R511SL,SR | 960 9004 301 | Metal film 47 ohm 1/4W | |
| **CAPACITORS GROUP** | | | |
| C501C | | Electrolytic 22μF/16V | |
| C501FL,FR | | Electrolytic 22μF/16V | |
| C501M | | Electrolytic 10μF/35V | |
| C501SL,SR | | Electrolytic 22μF/16V | |
| C502C | | Electrolytic 10μF/35V | |
| C502FL,FR | | Electrolytic 10μF/35V | |
| C502SL,SR | | Electrolytic 10μF/35V | |
| C503C | 963 9003 165 | Ceramic 220pF/500V | |
| C503FL,FR | 963 9003 165 | Ceramic 220pF/500V | |
| C503SL,SR | 963 9003 165 | Ceramic 220pF/500V | |
| C504C | 963 9003 178 | Ceramic 220pF/50V | |
| C504FL,FR | 963 9003 178 | Ceramic 220pF/50V | |
| C504SL,SR | 963 9003 178 | Ceramic 220pF/50V | |
| C505C | 963 9003 181 | Ceramic 33pF/500V | |
| C505FL,FR | 963 9003 181 | Ceramic 33pF/500V | |
| C505SL,SR | 963 9003 181 | Ceramic 33pF/500V | |
| C506C | | Electrolytic 100μF/10V | |
| C506FL,FR | | Electrolytic 100μF/10V | |
| C506SL,SR | | Electrolytic 100μF/10V | |
| C507C | 963 9003 194 | Mylar film 0.0022μF/100V | |
| C507FL,FR | 963 9003 194 | Mylar film 0.0022μF/100V | |
| C507SL,SR | 963 9003 194 | Mylar film 0.0022μF/100V | |
| C514C | | Electrolytic 22μF/16V | |
| C514FL,FR | | Electrolytic 22μF/16V | |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| **OTHER PARTS GROUP** | | | | |
| CN501 | 963 0085 506 | 9P connector socket (TUC-P) | | 1 |
| CN502-504 | 963 0085 603 | 5P connector socket (TUC-P) | | 3 |
| CN505 | 963 0085 700 | 6P connector socket (TUC-P) | | 1 |
| CP506 | 963 0060 709 | 8P connector base | | 1 |
| CP554 | 963 0060 903 | 15P connector base | | 1 |
| — | 960 0184 000 | Screw bracket | | 2 |

## DSP P.W.B. ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC801,802 | 269 0186 002 | IC GP1FA502RZ | |
| IC803 | 963 0073 903 | IC 74VHCU04 | |
| IC805,806 | 963 0043 807 | IC BA4510F | |
| IC807 | 963 0073 709 | IC M27W201-80B6 | |
| IC807S | 963 0025 508 | 32P IC socket | |
| IC808,809 | 963 0074 407 | IC MM74LCX574WMX | |
| IC810 | 960 0195 507 | IC LC89055W | |
| IC811 | 963 0074 805 | IC RC1117S33ST | |
| IC812 | 963 0079 208 | IC CS49326-CL | |
| IC813 | 963 0074 601 | IC AK4527B-VQ | |
| IC814~816 | 963 0024 004 | IC NJM2068MD | |
| IC817 | 269 0189 009 | IC GP1FA502TZ | |
| IC818,819 | 963 0074 203 | IC MM74LCX244WMX | |
| IC820 | 963 0074 708 | IC RC1117S25T | |
| IC822 | 960 0195 109 | IC SN74LV00APW | |
| IC828 | 963 0074 300 | IC MM74HCT244WMX | |
| IC829 | 960 0196 001 | IC NJM7805FA (S) | |
| IC830 | 963 0074 300 | IC MM74HCT244WMX | |
| IC831 | 960 0195 303 | IC SN74LV4040APWR | |
| IC832 | 963 0074 106 | IC MM74HC151MX | |
| Q804C | 960 0196 603 | Transistor KTC2874B | |
| Q804FL,FR | 960 0196 603 | Transistor KTC2874B | |
| Q804SL,SR | 960 0196 603 | Transistor KTC2874B | |
| Q804SW | 960 0196 603 | Transistor KTC2874B | |
| Q805 | 269 0083 901 | Transistor DTA114EK | |
| Q806 | 269 0082 902 | Transistor DTC114EK | |
| Q807 | 269 0083 901 | Transistor DTA114EK | |
| Q808 | 269 0082 902 | Transistor DTC114EK | |
| D801 | 960 0197 000 | Diode KDS160 | |
| D806,807 | 960 0197 000 | Diode KDS160 | |
| **RESISTORS GROUP** | | | |
| R801 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R803 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R804,805 | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R808 | 963 9004 274 | Carbon chip 33 kohm 1/16W | |
| R817~825 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R830 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R831 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R834,835 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R836 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R838 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R839 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R841 | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R842 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R845R | 963 9004 355 | Carbon chip 47 kohm 1/16W | |
| R848 | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| R850 | 963 9004 465 | Carbon chip 75 ohm 1/16W | |
| R854 | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R854L | 963 9004 355 | Carbon chip 47 kohm 1/16W | |
| R855 | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R856 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R859L,R | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R860L,R | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R861 | 963 9004 326 | Carbon chip 47 ohm 1/16W | |
| R861L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R862L,R | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R863L,R | 963 9004 339 | Carbon chip 470 ohm 1/16W | |
| R864C | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R864FL,FR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R864SL,SR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R864SW | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R866C | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R866FL,FR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R866SL,SR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R866SW | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R867C | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R867FL,FR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R867SL,SR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R867SW | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R868C | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R868FL,FR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R868SL,SR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R868SW | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R869C | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R869FL,FR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R869SL,SR | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R869SW | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R870C | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R870FL,FR | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R870SL,SR | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R870SW | 963 9003 398 | Carbon chip 1 kohm 1/16W | |
| R871C | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R871FL,FR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R871SL,SR | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R871SW | 963 9004 083 | Carbon chip 100 kohm 1/16W | |
| R872C | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | |
| R872FL,FR | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | |
| R872SL,SR | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | |
| R872SW | 963 9004 216 | Carbon chip 2.2 kohm 1/16W | |
| R880,881 | 963 9004 326 | Carbon chip 47 ohm 1/16W | |
| | | | |
| R911 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R913 | 963 9004 096 | Carbon chip 1 Mohm 1/16W | |
| R922 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R923 | 963 9004 410 | Carbon chip 6.2 kohm 1/16W | |
| R927 | 963 9004 465 | Carbon chip 75 ohm 1/16W | |
| R928 | 963 9004 371 | Carbon chip 5.1 kohm 1/16W | |
| R929 | 963 9004 481 | Carbon chip 8.2 kohm 1/16W | |
| R930 | 963 9004 261 | Carbon chip 3 kohm 1/16W | |
| R931 | 963 9004 410 | Carbon chip 6.2 kohm 1/16W | |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R931L,R | 963 9004 177 | Carbon chip 18 kohm 1/16W | |
| R932 | 963 9004 342 | Carbon chip 4.7 kohm 1/16W | |
| R938 | 963 9004 368 | Carbon chip 470 kohm 1/16W | |
| R940 | 963 9004 070 | Carbon chip 10 kohm 1/16W | |
| R949 | 963 9004 326 | Carbon chip 47 ohm 1/16W | |
| R952,953 | 963 9003 385 | Carbon chip 100 ohm 1/16W | |
| **CAPACITORS GROUP** | | | |
| C801 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C802,803 | 963 9004 591 | Ceramic chip 22pF/50V | |
| C805 | 963 9004 591 | Ceramic chip 22pF/50V | |
| C808 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C809 | | Electrolytic 47µF/10V | |
| C810 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C811 | | Electrolytic 47µF/10V | |
| C812 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C813 | | Electrolytic 47µF/10V | |
| C814 | 963 9004 591 | Ceramic chip 22pF/50V | |
| C815 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C816 | 963 9004 591 | Ceramic chip 22pF/50V | |
| C817 | | Electrolytic 0.1µF/50V | |
| C818 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C819,820 | | Electrolytic 47µF/10V | |
| C821 | | Electrolytic 100µF/10V | |
| C822,823 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C824 | | Electrolytic 47µF/10V | |
| C825 | | Electrolytic 1µF/50V | |
| C826 | | Electrolytic 10µF/35V | |
| C827 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C828 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C829 | | Electrolytic 10µF/35V | |
| C830~832 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C833 | 963 9004 656 | Ceramic chip 470pF/50V | |
| C834 | | Electrolytic 10µF/35V | |
| C835 | | Electrolytic 1µF/50V | |
| C836 | | Electrolytic 220µF/6.3V | |
| C837,838 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C839 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C840 | | Electrolytic 2.2µF/50V | |
| C841 | | Electrolytic 47µF/10V | |
| C842 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C844 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C845 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C849 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C851 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C854,855 | | Electrolytic 100µF/25V | |
| C856~863 | 963 9004 711 | Ceramic chip 0.1µF/50V | |
| C864L,864R | | Electrolytic 10µF/35V | |
| C865L,R | 963 9004 575 | Ceramic chip 100pF/50V | |
| C866 | 963 9004 698 | Ceramic chip 0.01µF/50V | |
| C869L,R | 963 9004 575 | Ceramic chip 100pF/50V | |
| C871L,R | 963 9004 685 | Ceramic chip 1000pF/50V | |

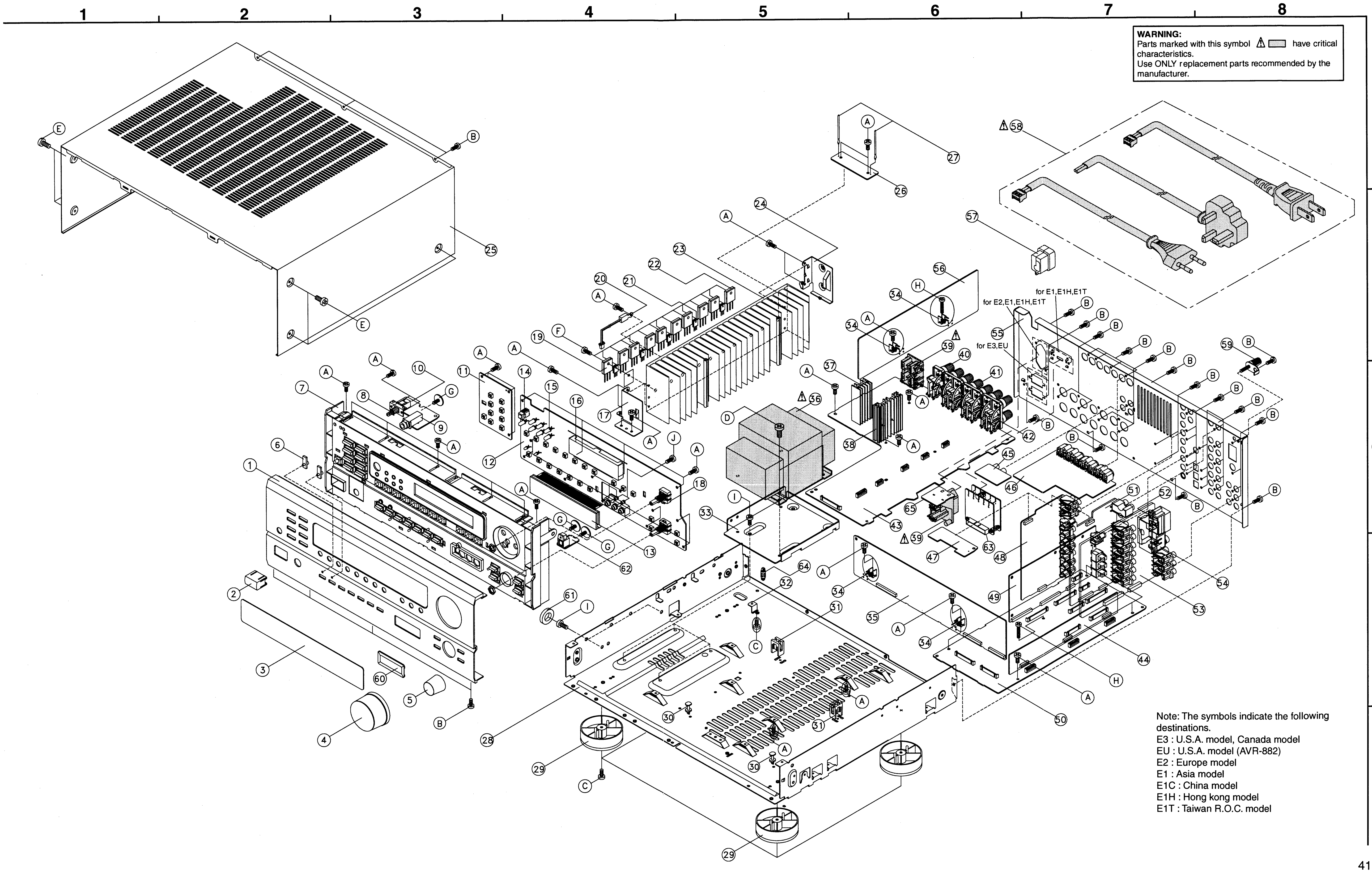
| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C873C | 963 9004 672 | Ceramic chip 680pF/50V | |
| C873FL,FR | 963 9004 672 | Ceramic chip 680pF/50V | |
| C873SL,SR | 963 9004 672 | Ceramic chip 680pF/50V | |
| C873SW | 963 9004 672 | Ceramic chip 680pF/50V | |
| C874C | 963 9004 672 | Ceramic chip 680pF/50V | |
| C874FL,FR | 963 9004 672 | Ceramic chip 680pF/50V | |
| C874SL,SR | 963 9004 672 | Ceramic chip 680pF/50V | |
| C874SW | 963 9004 672 | Ceramic chip 680pF/50V | |
| C875C | | Electrolytic 10μF/35V | |
| C875FL,FR | | Electrolytic 10μF/35V | |
| C875SL,SR | | Electrolytic 10μF/35V | |
| C875SW | | Electrolytic 10μF/35V | |
| C876C | 963 9004 740 | Ceramic chip 3300pF/50V | |
| C876FL,FR | 963 9004 740 | Ceramic chip 3300pF/50V | |
| C876SL,SR | 963 9004 740 | Ceramic chip 3300pF/50V | |
| C876SW | 963 9004 740 | Ceramic chip 3300pF/50V | |
| C880C | | Electrolytic 10μF/35V | |
| C880FL,FR | | Electrolytic 10μF/35V | |
| C880SL,SR | | Electrolytic 10μF/35V | |
| C880SW | | Electrolytic 10μF/35V | |
| C908,909 | 963 9004 614 | Ceramic chip 27pF/50V | |
| C916 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C917 | | Electrolytic 10μF/35V | |
| C918 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C919 | 963 9004 698 | Ceramic chip 0.01μF/50V | |
| C920 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C921 | 963 9004 698 | Ceramic chip 0.01μF/50V | |
| C923 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C925 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C926 | | Electrolytic 10μF/35V | |
| C931 | 963 9004 698 | Ceramic chip 0.01μF/50V | |
| C936 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C937 | | Electrolytic 10μF/35V | |
| C938 | | Electrolytic 1μF/50V | |
| C939,940 | 963 9004 698 | Ceramic chip 0.01μF/50V | |
| C943 | | Electrolytic 0.1μF/50V | |
| C944 | 963 9004 698 | Ceramic chip 0.01μF/50V | |
| C946,947 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C948 | | Electrolytic 10μF/35V | |
| C949 | | Electrolytic 2.2μF/50V | |
| C950 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C951 | | Electrolytic 100μF/10V | |
| C952,953 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C954 | 963 9004 698 | Ceramic chip 0.01μF/50V | |
| C956 | 963 9004 685 | Ceramic chip 1000pF/50V | |
| C957 | 963 9004 711 | Ceramic chip 0.1μF/50V | |
| C958 | | Electrolytic 100μF/10V | |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| **OTHER PARTS GROUP** | | | | |
| CB801 | 963 0050 502 | Chip emifil | | 1 |
| CB803~808 | 963 0050 502 | Chip emifil | | 6 |
| CB828 | 963 0050 502 | Chip emifil | | 1 |
| CN801,802 | 963 0085 302 | 17P connector socket (TUC-P) | | 2 |
| CN803 | 963 0085 409 | 10P connector socket (TUC-P) | | 1 |
| JACK801 | 963 0052 500 | 1P pin jack | | 1 |
| L801,802 | 963 0050 803 | Inductor 4.7μH | | 2 |
| L803 | 963 0050 900 | Inductor 2.2μH | | 1 |
| L805,806 | 963 0050 803 | Inductor 4.7μH | | 2 |
| L807 | 963 0050 900 | Inductor 2.2μH | | 1 |
| XTAL801 | 960 0180 907 | Crystal 12.288MHz | | 1 |

## VOLTAGE P.W.B. ASS'Y

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| OTHER PARTS GROUP | | | | |
| CN105 | 963 0059 202 | 2P connector cord | E1,E1H,E1T | 1 |
| CN903 | 963 0058 805 | 2P connector cord | E1,E1H,E1T | 1 |
| CP901 | 963 0061 203 | 5P connector base | E1,E1H,E1T | 1 |
| CP902 | 963 0059 309 | 3P connector cord | E1,E1H,E1T | 1 |
| ⚠ F101 | 960 0142 602 | Fuse 2.5A | E1,E1H,E1T | 1 |
| ⚠ F101A,B | 960 0005 804 | Fuse clip | E1,E1H,E1T | 2 |
| ⚠ F102 | 963 0044 709 | Fuse 3.15A | E1,E1H,E1T | 1 |
| ⚠ F102A,B | 960 0005 804 | Fuse clip | E1,E1H,E1T | 2 |
| ⚠ F901 | 963 0057 107 | Fuse 6.3A | E1,E1H,E1T | 1 |
| ⚠ F901A,B | 960 0005 804 | Fuse clip | E1,E1H,E1T | 2 |
| ⚠ JK911 | 960 0143 203 | AC outlet | E1,E1H,E1T | 1 |
| ⚠ JK912 | 963 0056 904 | SLIDE SW | E1,E1H,E1T | 1 |

# EXPLODED VIEW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for E2,E1,E1H,E1T
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**WARNING:**
Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

Note: The symbols indicate the following destinations.
E3 : U.S.A. model, Canada model
EU : U.S.A. model (AVR-882)
E2 : Europe model
E1 : Asia model
E1C : China model
E1H : Hong kong model
E1T : Taiwan R.O.C. model

# PARTS LIST OF EXPLODED VIEW

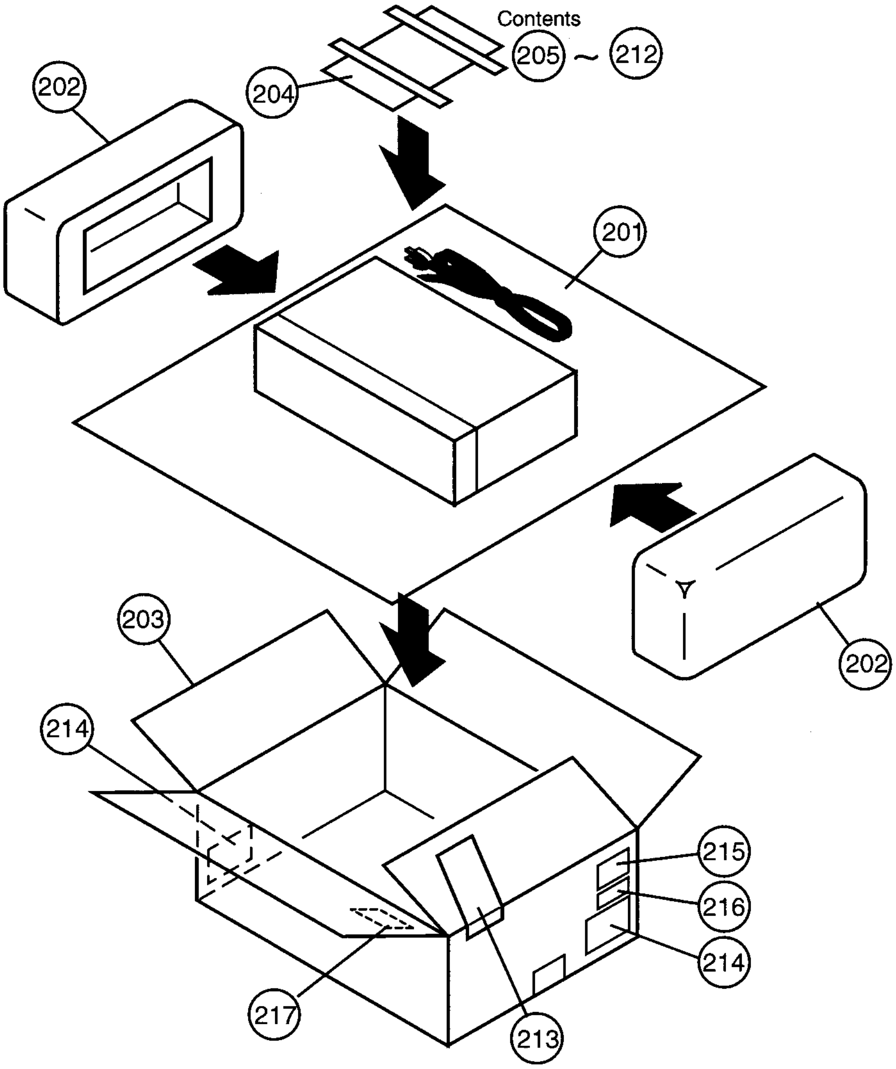
**Note:** The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A. model, Canada model　E1C: China model
EU: U.S.A. model (AVR-882)　E1H: Hong Kong model
E2: Europe model　E1T: Taiwan R.O.C. model
E1: Asia model

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
|  | 963 0082 606 | Main P.W.B assy | for E3, EU | 1 |
|  | 963 0082 622 |  | for E2 | 1 |
|  | 963 0082 635 |  | for E1C | 1 |
|  | 963 0082 648 |  | for E1, E1H, E1T | 1 |
| 43 |  | Main P.W.B assy |  | 1 |
| 44 |  | Front-CNT P.W.B assy |  | 1 |
| 51 |  | Input P.W.B assy |  | 1 |
|  | 963 0082 703 | Processor P.W.B assy | for E3, EU | 1 |
|  | 963 0082 729 |  | for E2 | 1 |
|  | 963 0082 732 |  | for E1C |  |
|  | 963 0082 745 |  | for E1, E1H, E1T | 1 |
| 12 |  | Front P.W.B assy |  | 1 |
| 50 |  | CPU P.W.B assy |  | 1 |
| 62 |  | Front-Optical P.W.B assy |  | 1 |
|  | 963 0082 907 | CNT P.W.B assy | for E3, EU | 1 |
|  | 963 0082 923 |  | for E2 |  |
|  | 963 0082 936 |  | for E1C |  |
|  | 963 0082 949 |  | for E1, E1H, E1T | 1 |
| 10 |  | Head phone P.W.B assy |  | 1 |
| 11 |  | Switch P.W.B assy |  | 1 |
| 26 |  | Video-CNT P.W.B assy |  | 1 |
| 35 |  | CNT P.W.B assy |  | 1 |
| 45 |  | Preout P.W.B assy |  | 1 |
| 46 |  | S-Video P.W.B assy |  | 1 |
| 47 |  | CDR-CNT P.W.B assy |  | 1 |
| 48 |  | Video P.W.B assy |  | 1 |
| 53 |  | Tuner P.W.B assy |  | 1 |
| 65 |  | Outlet P.W.B assy |  | 1 |
|  | 963 0082 800 | Pre-Amp P.W.B assy | for E3, EU | 1 |
|  | 963 0082 826 |  | for E2 |  |
|  | 963 0082 839 |  | for E1C |  |
|  | 963 0082 842 |  | for E1, E1H, E1T |  |
| 56 |  | Pre-Amp P.W.B assy |  | 1 |
|  | 963 0083 003 | DSP P.W.B assy | for E3, EU | 1 |
|  | 963 0083 029 |  | for E2 |  |
|  | 963 0083 032 |  | for E1C |  |
|  | 963 0083 045 |  | for E1, E1H, E1T |  |
| 49 |  | DSP P.W.B assy |  | 1 |
|  | 963 0088 600 | Voltage P.W.B assy | for E1,E1H,E1T | 1 |
| 63 |  | Voltage P.W.B assy | for E1,E1H,E1T | 1 |
| 1 | 963 0082 004 | Front panel | for E3 | 1 |
|  | 963 0082 062 |  | for EU |  |
|  | 963 0082 017 |  | for E2 (Black model) | 1 |
|  | 963 0082 020 |  | for E2 (Gold model) | 1 |
|  | 963 0082 046 |  | for E1 (Gold model) | 1 |
|  | 963 0082 059 |  | for E1 (Black model) | 1 |
| 2 | 960 0185 009 | Power button | for Black model | 1 |
|  | 963 0055 206 | Power button (GO) | for Gold model | 1 |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 3 | 963 0082 305 | Window |  | 1 |
| 4 | 963 0054 906 | Main volume knob | for Black model | 1 |
|  | 963 0055 002 | Main volume knob (GO):MOLD | for E2 (Gold model) | 1 |
|  | 112 0839 008 | Main volume knob (GO) : AL | for E1, E1C, E1H, E1T | 1 |
| 5 | 963 0054 809 | Select knob(BK) | for E3, EU, E2/Black model | 1 |
|  | 963 0055 109 | Select knob (GO) : MOLD | for E2 (Gold model) | 1 |
|  | 112 0835 015 | Select knob (GO) : AL | for E1, E1C, E1H, E1T | 1 |
| 6 | 963 0051 307 | Lens |  | 2 |
| 7 | 963 0082 208 | Front frame | for Black model | 1 |
|  | 963 0082 211 |  | for Gold model | 1 |
| 8 | 960 0176 209 | Push switch | for E3, EU | 1 |
|  | 963 0056 603 | Push switch | for E1, E1C, E1H, E1T, E2 | 1 |
| 9 | 960 0187 502 | Head phone jack (D6.5) | for E3, EU, E2 | 1 |
|  | 960 0176 306 | Head phone jack (D6.5) | for E1, E1C, E1H, E1T | 1 |
| 13 | 960 0180 509 | FLT (16-ST-42GNK) |  | 1 |
| 14 | 960 0181 100 | IC NJL64H380A | RMC301 | 1 |
| 15 | 960 0197 204 | LED PI5-RD/HL50RDRF4T | LED301-309 | 8 |
| 16 | 960 0184 408 | FLT holder |  | 1 |
| 17 | 960 0184 301 | Heat sink bracket F |  | 1 |
| 18 | 960 0181 207 | Rotary encoder (L=25) | VEC301 | 1 |
|  | 960 0181 207 | Rotary encoder (L=25) | VEC302 | 1 |
|  | 963 0084 109 | Rotary encoder (L=20) | VEC302 (for E1, E1C, E1H, E1T) | 1 |
| 19 | 963 0044 107 | Transistor 2SB1560Y | Q102C,FL,FR,SL,SR | 5 |
| 20 | 960 0187 900 | Posistor P43T7D330BW16 |  | 1 |
| 21 | 963 0058 106 | Transistor 2SD947F | Q103C,FL,FR,SL,SR | 5 |
| 22 | 963 0044 204 | Transistor 2SD2390Y | Q101C,FL,FR,SL,SR | 5 |
| 23 | — | Heat sink |  | 1 |
| 24 | 960 0184 204 | Heat sink bracket B |  | 1 |
| 25 | 960 0183 205 | Top cabinet | for Black model | 1 |
|  | 963 0055 507 | Top cabinet | for Gold model | 1 |
| 27 | — | Wire clamp |  | 2 |
| 28 | 960 0198 216 | Chassis |  | 1 |
| 29 | 960 0183 904 | Foot assy |  | 4 |
| 30 | 963 0051 103 | Card spacer |  | 2 |
| 31 | 960 0003 301 | PCB supporter |  | 2 |
| 32 | 960 0184 107 | Supporter bracket |  | 1 |
| 33 | 960 0192 306 | Trans bracket |  | 1 |
| 34 | 960 0184 000 | Screw bracket |  | 4 |
| ⚠ 36 | 963 0088 503 | Power trans | for E3, EU | 1 |
|  | 963 0088 516 |  | for E2 | 1 |
|  | 963 0088 529 |  | for E1, E1H, E1T | 1 |
|  | 963 0088 532 |  | for E1C | 1 |
| 37 | — | Heat sink |  | 1 |
| 38 | — | Heat sink |  | 1 |
| ⚠ 39 | 960 0187 803 | AC outlet(2P) | JK104 For E3,EU | 1 |
| ⚠ 39 | 960 0143 203 | AC outlet | for E2,E1,E1H,E1T | 1 |
| 40 | 960 0194 809 | 2P speaker terminal | JK103 | 1 |
| 41 | 963 0074 009 | 8P speaker terminal |  | 1 |
| 42 | 960 0188 608 | 4P speaker terminal |  | 1 |
| 52 | 963 0088 406 | Plate |  | 1 |
| 54 | 963 0054 003 | Shield tuner pack |  | 1 |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 55 | 963 0082 101 | Back panel | for E3 | 1 |
| | 963 0082 156 | | for 882EU | 1 |
| | 963 0082 114 | | for E2 | 1 |
| | 963 0082 130 | | for E1, E1H, E1T | 1 |
| | 963 0082 143 | | for E1C | 1 |
| 57 | 960 0192 403 | Cord bush | | 1 |
| ⚠ 58 | 960 0166 400 | AC cord assy | for E3, EU | 1 |
| | 960 0165 304 | | for E2 | 1 |
| | 963 0060 408 | | for E1, E1T | 1 |
| | 960 0143 009 | | for E1H | 1 |
| | 963 0060 301 | | for E1C | 1 |
| 59 | 960 0183 807 | Terminal | | 1 |
| 60 | 963 0088 309 | Cover | for E3, EU, E2/Black | 1 |
| | 963 0088 312 | | for E2/Gold | 1 |
| 61 | 963 0051 200 | Cushion | | 2 |
| 64 | 963 0044 602 | supporter | for E2, E1, E1C, E1H, E1T | 1 |
| ★ | 960 0093 104 | Push livet | for E2, E1, E1C, E1H, E1T | 14 |
| ★ | 963 0061 407 | FFC cable | | 1 |
| A | 963 0018 007 | Screw (2S 3×8 ZNY/BH) | | 50 |
| B | 960 0108 701 | Screw (2S 3×10 DOT BK) | | 43 |
| C | 963 0048 200 | Screw (2S 3×10 ZNY/BH) | | 10 |
| D | 960 9008 417 | Screw (3S 4×8 ZNY/BH) | | 4 |
| E | 963 0048 307 | Screw (2S 4×8 DOT BK) | | 6 |
| F | 963 9004 009 | Screw (2S 3×14 WASHER ZNY/HH) | | 15 |
| G | 960 9008 420 | Screw (2S 3×8 WASHER) | | 3 |
| H | 963 0018 104 | Screw (2S 3×17 ZNY/BH) | | 2 |
| I | 963 9004 025 | Screw (3S 4×6 ZNY/BH) | | 6 |
| J | 963 9004 054 | Screw (2S 3×15 ZNY/BH) | | 2 |

## PACKING VIEW



**Note:** The symbols in the column "Remarks" indicate the following destinations.
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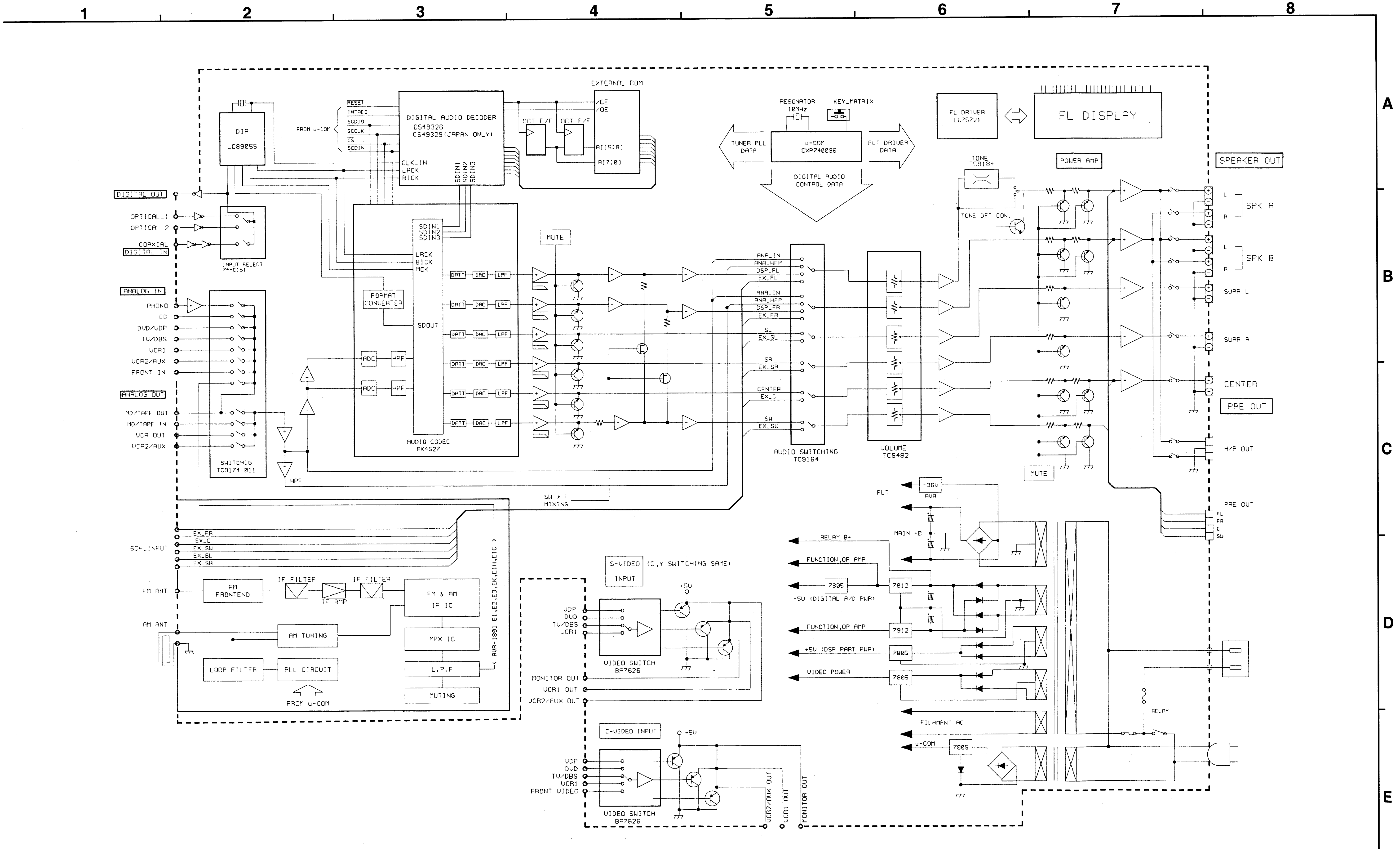
E2: Europe model E1T: Taiwan R.O.C. model
E1: Asia model

## PARTS LIST OF PACKING & ACCESSORIES

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 201 | 960 0185 601 | Set poly bag | | 1 |
| 202 | 960 0185 504 | Cushion | | 2 |
| 203 | 963 0082 509 | Carton case | for E3,E2 | 1 |
| 203 | 963 0085 205 | Carton case | for EU | 1 |
| 203 | 963 0082 512 | Carton case | for E1,E1C,E1T | 1 |
| 203 | 963 0082 525 | Carton case | for E1H | 1 |
| 204 | 963 0045 106 | Poly bag | | 1 |
| 205 | 963 0082 402 | Instruction manual | for E3,EU | 1 |
| 205 | 963 0082 415 | Instruction manual | for E2 | 1 |
| 205 | 963 0082 428 | Instruction manual | for E1,E1H,E1T | 1 |
| 205 | 963 0082 428 | Instruction manual | for E1C | 1 |
| 206 | 515 0867 101 | S.S. list | | 1 |
| 207 | 963 0052 306 | AM loop antenna | | 1 |
| 208 | 963 0052 209 | FM antenna | | 1 |
| 209 | 963 0084 002 | Remocon RC-897 | | 1 |
| 210 | — | Battery (R6P/AA) | | 2 |
| 211 | 963 0052 704 | FM antenna adapter | | 1 |
| 212 | 963 0061 300 | AC plug adapter | for E1T | 1 |
| 213 | 515 0817 009 | DEL Warranty home | for E3,EU | 1 |
| 214 | — | Control label | | 2 |
| 215 | — | UPC label | for E3 | 1 |
| 215 | — | UPC label | for EU | 1 |
| 215 | — | EAN label | for E2(Black model) | 1 |
| 215 | — | EAN label | for E2(Gold model) | 1 |
| 216 | — | Carton label | for E1C | 1 |
| 217 | — | Kolin label | for E1T | 1 |
| ★ | 513 3322 003 | Label (RDS,RADIO TEXT) | for E2 | 2 |
| ★ | — | Label (CCIB) | for E1C | 2 |
| ★ | 513 9111 001 | Color label (Gold) | for Gold model | 2 |
| ★ | 963 0055 905 | Pad | for E1H | 2 |

# BLOCK DIAGRAM


1
2
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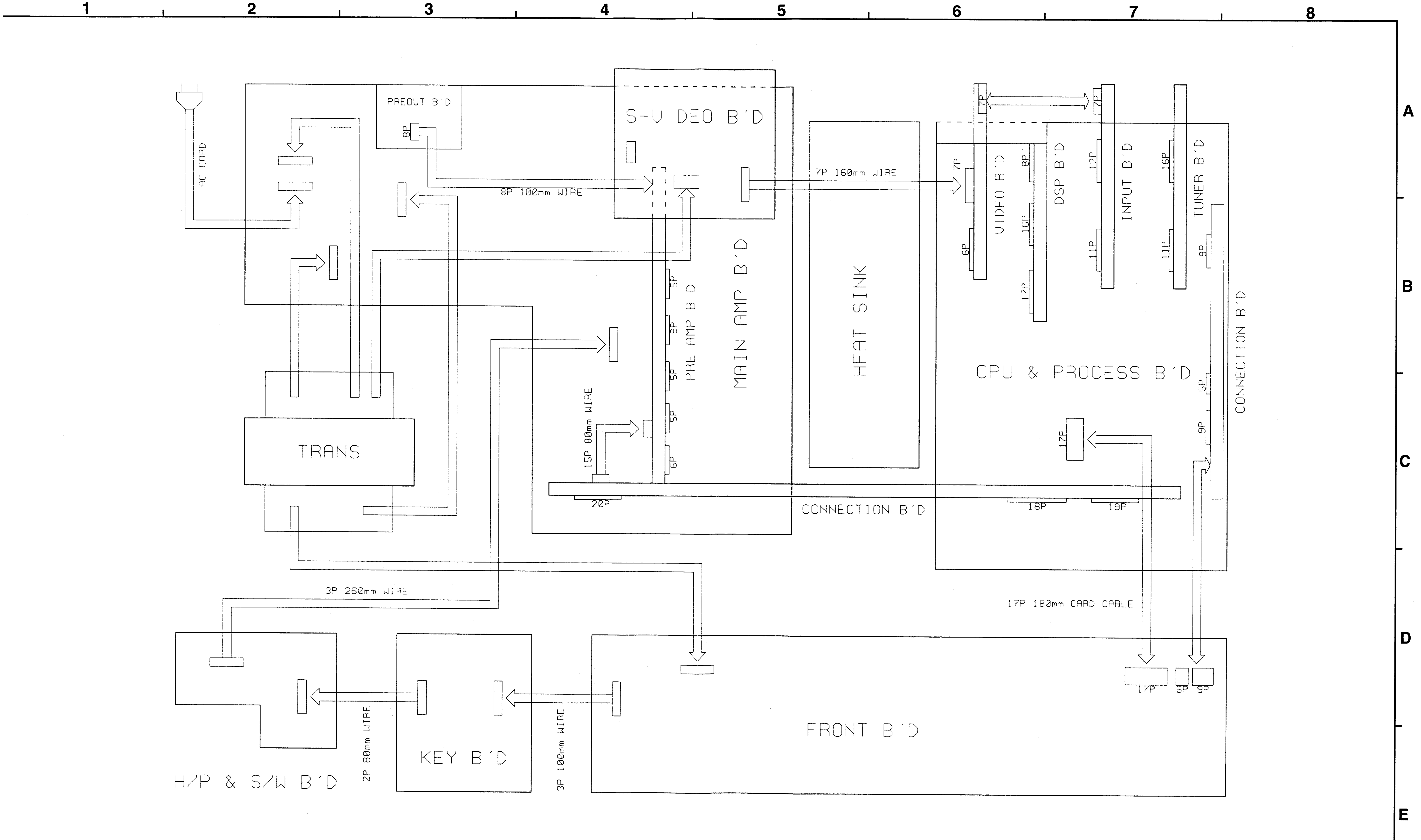
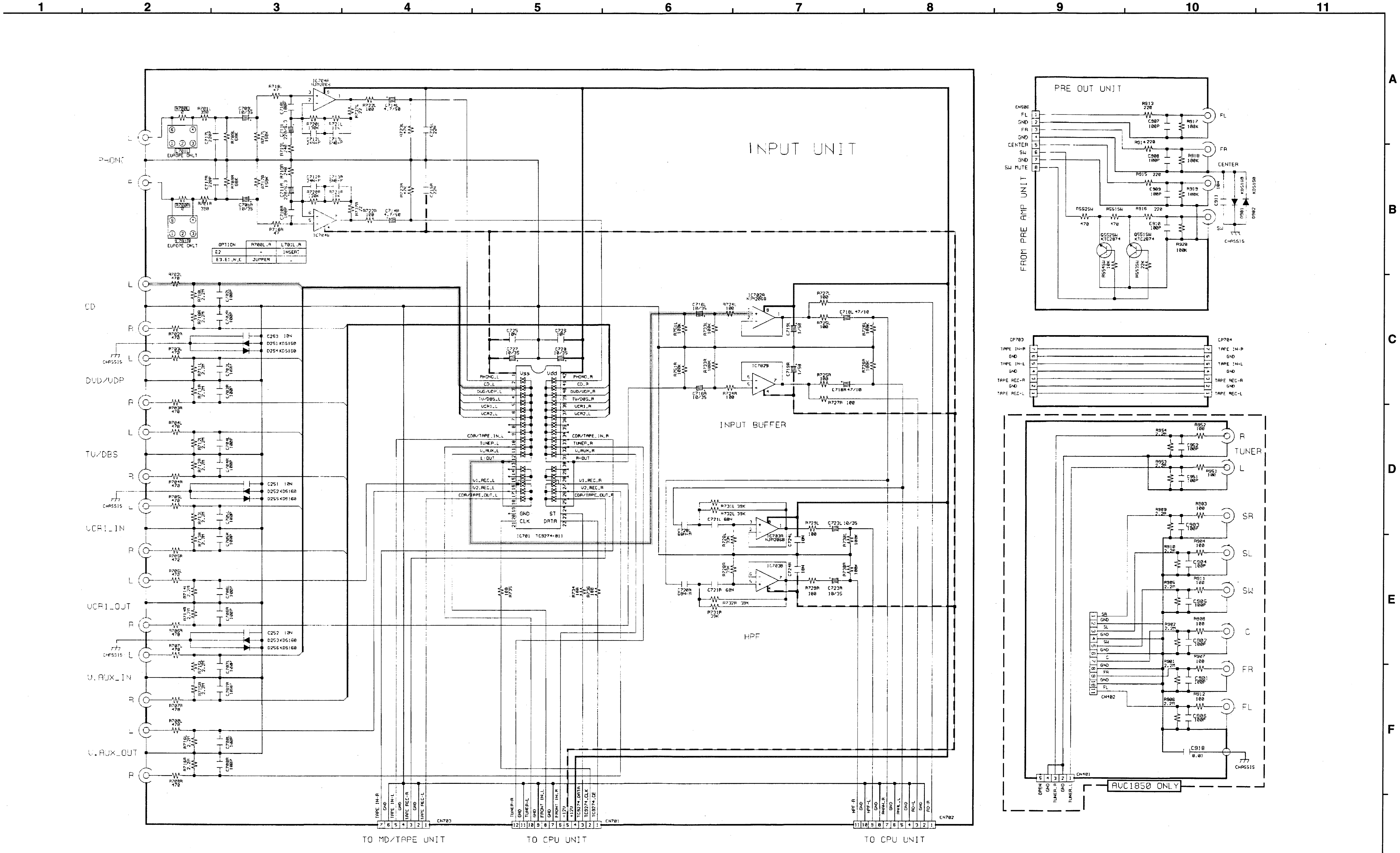
5
6
7
8
A
B
C
D
E
DIR
LC89055
RESET
INTREQ
SCDIO
SCCLK
CS
SCDIN
FROM u-COM
DIGITAL AUDIO DECODER
CS49326
CS49329(JAPAN ONLY)
CLK_IN
LRCK
BICK
SDIN1
SDIN2
SDIN3
EXTERNAL ROM
/CE
/OE
OCT F/F
OCT F/F
A[15:8]
A[7:0]
RESONATOR
10MHz
KEY_MATRIX
TUNER PLL DATA
u-COM
CXP740096
FLT DRIVER DATA
DIGITAL AUDIO CONTROL DATA
FL DRIVER
LC75721
FL DISPLAY
POWER AMP
TONE
TC9184
TONE DFT CON.
SPEAKER OUT
SPK A
SPK B
L
R
SURR L
SURR R
CENTER
PRE OUT
H/P OUT
PRE OUT
FL
FR
C
SW
DIGITAL OUT
OPTICAL_1
OPTICAL_2
COAXIAL
DIGITAL IN
INPUT SELECT
74HC151
ANALOG IN
PHONO
CD
DVD/VDP
TV/DBS
VCR1
VCR2/AUX
FRONT IN
ANALOG OUT
MD/TAPE OUT
MD/TAPE IN
VCR OUT
VCR2/AUX
SWITCHIG
TC9174-011
HPF
FORMAT CONVERTER
SDOUT
LRCK
BICK
MCK
ADC
HPF
DATT
DAC
LPF
AUDIO CODEC
AK4527
MUTE
SW + F MIXING
ANA_IN
ANA_HFP
DSP_FL
EX_FL
ANA_IN
ANA_HFP
DSP_FR
EX_FR
SL
EX_SL
SR
EX_SR
CENTER
EX_C
SW
EX_SW
AUDIO SWITCHING
TC9164
VOLUME
TC9482
MUTE
FLT
-36V
AVR
MAIN +B
RELAY B-
FUNCTION,OP AMP
7805
7812
+5V (DIGITAL A/D PWR)
FUNCTION,OP AMP
7912
+5V (DSP PART PWR)
7805
VIDEO POWER
7805
FILAMENT AC
u-COM
7805
RELAY
6CH_INPUT
EX_FR
EX_C
EX_SW
EX_SL
EX_SR
FM ANT
AM ANT
FM FRONTEND
IF FILTER
IF AMP
IF FILTER
FM & AM IF IC
AM TUNING
MPX IC
LOOP FILTER
PLL CIRCUIT
L.P.F
MUTING
FROM u-COM
( AVR-1801 E1,E2,E3,EK,E1H,E1C )
S-VIDEO INPUT
(C,Y SWITCHING SAME)
+5V
VDP
DVD
TV/DBS
VCR1
VIDEO SWITCH
BA7626
MONITOR OUT
VCR1 OUT
VCR2/AUX OUT
C-VIDEO INPUT
+5V
VDP
DVD
TV/DBS
VCR1
FRONT VIDEO
VIDEO SWITCH
BA7626
VCR2/AUX OUT
VCR1 OUT
MONITOR OUT

## WIRING DIAGRAM


1
2
3
4
5
6
7
8
A
B
C
D
E
AC CORD
PREOUT B'D
8P
S-V DEO B'D
8P 100mm WIRE
7P 160mm WIRE
HEAT SINK
MAIN AMP B'D
PRE AMP B D
5P
9P
5P
5P
6P
15P 80mm WIRE
TRANS
20P
CONNECTION B'D
3P 260mm WIRE
7P
7P
VIDEO B'D
7P
6P
DSP B'D
8P
16P
17P
INPUT B'D
12P
11P
TUNER B'D
16P
11P
CPU & PROCESS B'D
CONNECTION B'D
9P
5P
9P
17P
18P
19P
17P 180mm CARD CABLE
H/P & S/W B'D
2P 80mm WIRE
KEY B'D
3P 100mm WIRE
FRONT B'D
17P
5P
9P

AVR1802 WIRING DIAGRAM

## SCHEMATIC DIAGRAMS (1/8)


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
INPUT UNIT
PHONE
L
R
EUROPE ONLY
OPTION
R700L,R
L701L,R
E2
INSERT
E3,E1,N,C
JUMPER
CD
DVD/VDP
TV/DBS
VCR1_IN
VCR1_OUT
V.AUX_IN
V.AUX_OUT
CHASSIS
IC701 TC9274-011
INPUT BUFFER
HPF
PRE OUT UNIT
FROM PRE AMP UNIT
FL
FR
CENTER
SW
TUNER
SR
SL
C
AVC1850 ONLY
CN701
CN702
CN703
TO MD/TAPE UNIT
TO CPU UNIT
TO CPU UNIT

+ B LINE
– B LINE
SIGNAL LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

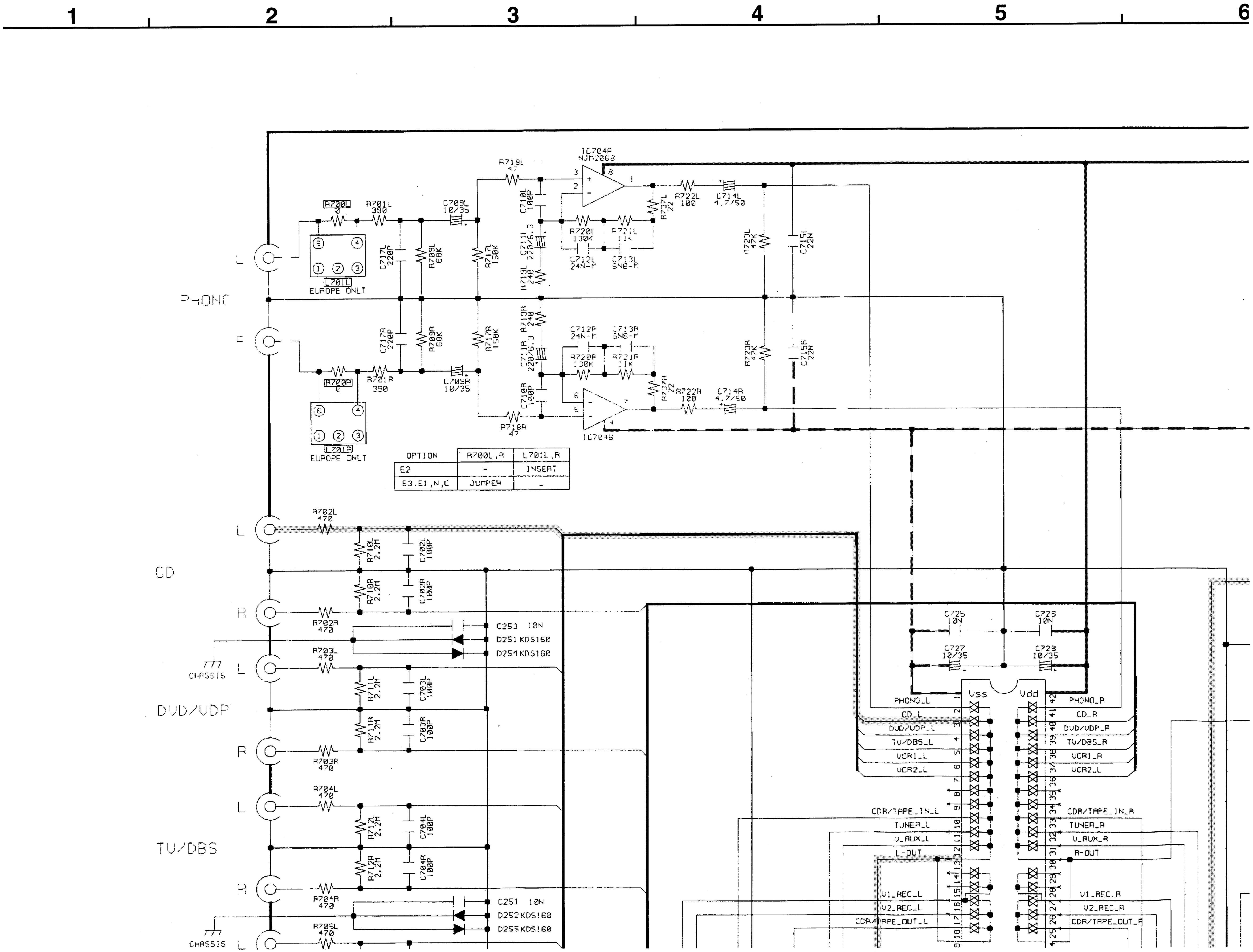
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

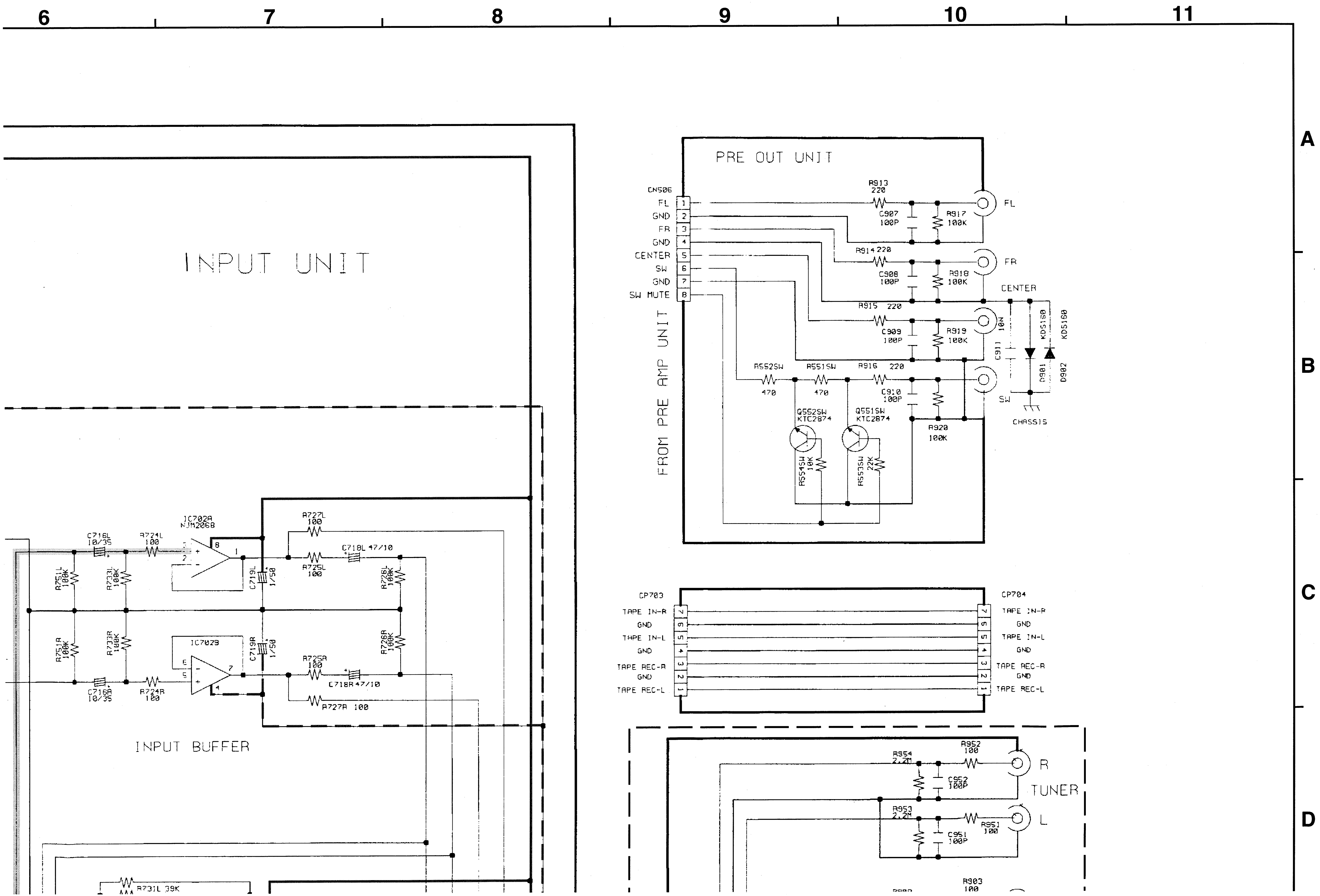
SCHEMATIC DIAGRAMS (1/8)
INPUT UNIT
CDR-CNT UNIT
PRE OUT UNIT

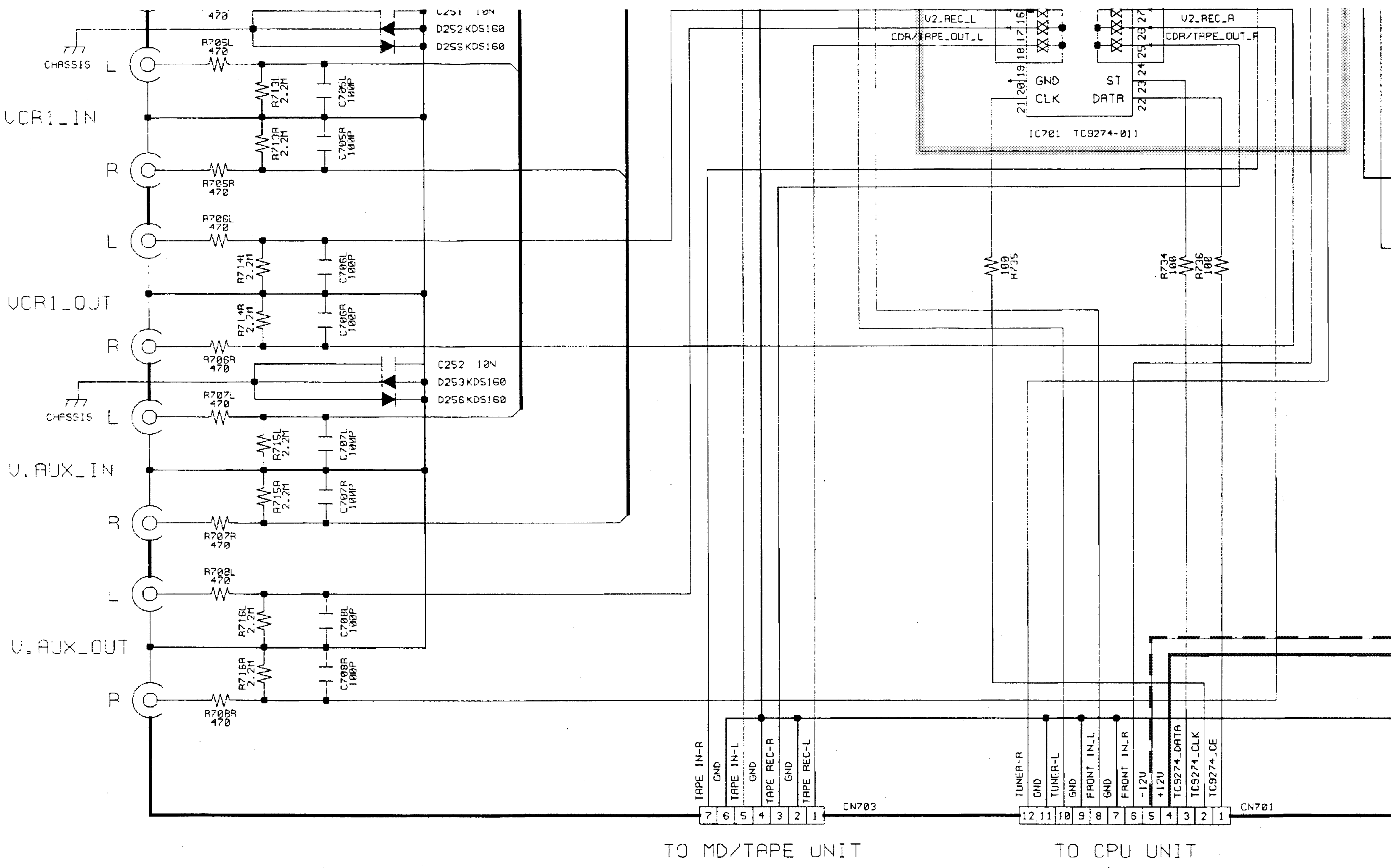
H

# SCHEMATIC DIAGRAMS (1/8)

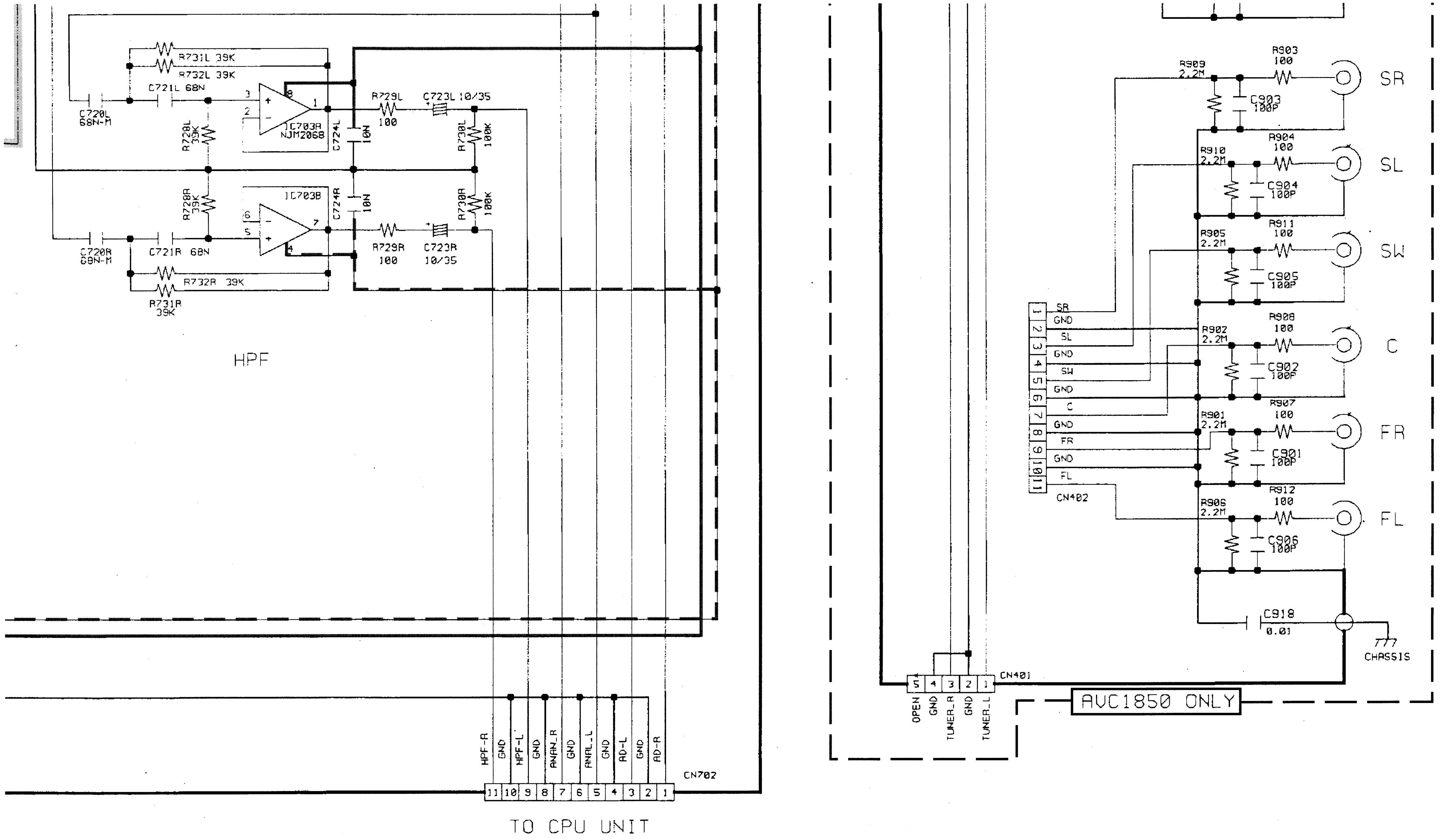

1
2
3
4
5
6
PHONO
L
R
CD
DVD/VDP
TV/DBS
CHASSIS
R700L 0
R701L 390
C709L 10/35
R718L 47
IC704A NJM2068
R722L 100
L714L 4.7/50
C717L 220P
R709L 68K
R717L 150K
C710L 100P
C711L 220/6.3
R720L 130K
R721L 11K
C712L 24N-K
C713L 5N8-K
R719L 240
R737L 22
R723L 47K
C715L 22N
L701L EUROPE ONLY
R700R 0
R701R 390
C709R 10/35
R718R 47
IC704B
R722R 100
L714R 4.7/50
C717R 220P
R709R 68K
R717R 150K
C710R 100P
C711R 220/6.3
R720R 130K
R721R 11K
C712R 24N-K
C713R 5N8-K
R719R 240
R737R 22
R723R 47K
C715R 22N
L701R EUROPE ONLY
R702L 470
R710L 2.2M
C702L 100P
R710R 2.2M
C702R 100P
R702R 470
C253 10N
D251 KDS160
D254 KDS160
R703L 470
R711L 2.2M
C703L 100P
R711R 2.2M
C703R 100P
R703R 470
R704L 470
R712L 2.2M
C704L 100P
R712R 2.2M
C704R 100P
R704R 470
C251 10N
D252 KDS160
D255 KDS160
R705L 470
C725 10N
C726 10N
C727 10/35
C728 10/35
Vss
Vdd
PHONO_L
CD_L
DVD/VDP_L
TV/DBS_L
VCR1_L
VCR2_L
CDR/TAPE_IN_L
TUNER_L
V_AUX_L
L-OUT
V1_REC_L
V2_REC_L
CDR/TAPE_OUT_L
PHONO_R
CD_R
DVD/VDP_R
TV/DBS_R
VCR1_R
VCR2_L
CDR/TAPE_IN_R
TUNER_R
V_AUX_R
R-OUT
V1_REC_R
V2_REC_R
CDR/TAPE_OUT_R

| OPTION | R700L,R | L701L,R |
|---|---|---|
| E2 | - | INSERT |
| E3,E1,N,C | JUMPER | - |


6
7
8
9
10
11
A
B
C
D
INPUT UNIT
INPUT BUFFER
IC702A NJM2068
IC702B
C716L 10/35
C716R 10/35
R724L 100
R724R 100
R751L 100K
R751R 100K
R733L 100K
R733R 100K
C719L 1/50
C719R 1/50
R727L 100
R727R 100
R725L 100
R725R 100
C718L 47/10
C718R 47/10
R726L 100K
R726R 100K
R731L 39K
PRE OUT UNIT
CN506
FL
GND
FR
GND
CENTER
SW
GND
SW MUTE
FROM PRE AMP UNIT
R913 220
R914 220
R915 220
R916 220
C907 100P
C908 100P
C909 100P
C910 100P
R917 100K
R918 100K
R919 100K
R920 100K
C911 10N
D901 KDS160
D902 KDS160
CHASSIS
R552SW 470
R551SW 470
Q552SW KTC2874
Q551SW KTC2874
R554SW 10K
R553SW 22K
CP703
CP704
TAPE IN-R
GND
TAPE IN-L
GND
TAPE REC-R
GND
TAPE REC-L
TUNER
R
L
R954 2.2M
R953 2.2M
R952 100
R951 100
C952 100P
C951 100P
R903 100


CHASSIS
VCR1_IN
VCR1_OUT
V.AUX_IN
V.AUX_OUT
L
R
R705L 470
R705R 470
R706L 470
R706R 470
R707L 470
R707R 470
R708L 470
R708R 470
R713L 2.2M
R713R 2.2M
R714L 2.2M
R714R 2.2M
R715L 2.2M
R715R 2.2M
R716L 2.2M
R716R 2.2M
C705L 100P
C705R 100P
C706L 100P
C706R 100P
C707L 100P
C707R 100P
C708L 100P
C708R 100P
C251 10N
D252 KDS160
D255 KDS160
C252 10N
D253 KDS160
D256 KDS160
V2_REC_L
CDR/TAPE_OUT_L
V2_REC_R
CDR/TAPE_OUT_R
GND
CLK
ST
DATA
IC701 TC9274-011
R735 100
R734 100
R736 100
TAPE IN-R
GND
TAPE IN-L
TAPE REC-R
TAPE REC-L
CN703
TO MD/TAPE UNIT
TUNER-R
TUNER-L
FRONT IN_L
FRONT IN_R
-12V
+12V
TC9274_DATA
TC9274_CLK
TC9274_CE
CN701
TO CPU UNIT

NOTICE
ALL RESISTANCE VAL
ALL CAPACITANCE VA
EACH VOLTAGE AND C
CONDITION.
CIRCUIT AND PARTS A
NOTICE.


R731L 39K
R732L 39K
C721L 68N
C720L 68N-M
R728L 39K
IC703A NJM2068
C724L 10N
R729L 100
C723L 10/35
R730L 100K
IC703B
R728R 39K
C724R 10N
R729R 100
C723R 10/35
R730R 100K
C720R 68N-M
C721R 68N
R732R 39K
R731R 39K
HPF
HPF-R
GND
HPF-L
GND
ANAN_R
GND
ANAL_L
GND
AD-L
GND
AD-R
CN702
11 10 9 8 7 6 5 4 3 2 1
TO CPU UNIT
CN401
5 4 3 2 1
OPEN
GND
TUNER_R
GND
TUNER_L
AVC1850 ONLY
CN402
SR
GND
SL
GND
SW
GND
C
GND
FR
GND
FL
R909 2.2M
R903 100
C903 100P
SR
R910 2.2M
R904 100
C904 100P
SL
R905 2.2M
R911 100
C905 100P
SW
R902 2.2M
R908 100
C902 100P
C
R901 2.2M
R907 100
C901 100P
FR
R906 2.2M
R912 100
C906 100P
FL
C918 0.01
CHASSIS
E
F
G
H

——— +B LINE

– – – – –B LINE

▨ SIGNAL LINE

WARNING:

Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

CE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
NCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

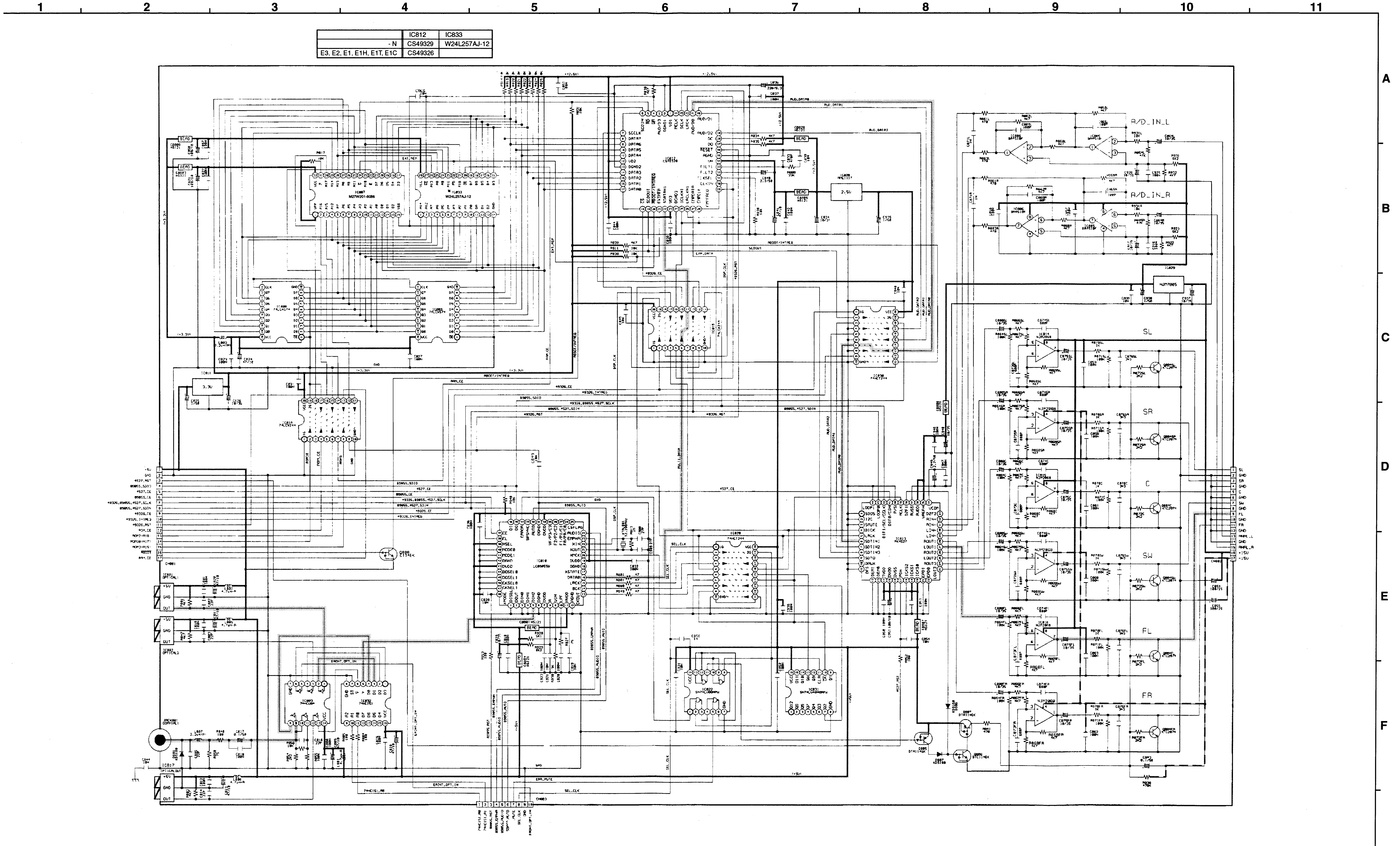
PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

# SCHEMATIC DIAGRAMS (1/8)

INPUT UNIT
CDR-CNT UNIT
PRE OUT UNIT

## SCHEMATIC DIAGRAMS (2/8)

|  | IC812 | IC833 |
|---|---|---|
| - N | CS49329 | W24L257AJ-12 |
| E3, E2, E1, E1H, E1T, E1C | CS49326 |  |


1
2
3
4
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6
7
8
9
10
11
A
B
C
D
E
F
G
H
IC807 M27W201-80B6
IC833 W24L257AJ-12
IC812 CS49326
IC808 74LS574
IC809 74LS574
IC818 74HC244
IC813 AK4527
IC816 LC89055W
A/D_IN_L
A/D_IN_R
2.5V
3.3V
SL
SR
C
SW
FL
FR
NJM7805
JACK801 COAXIAL
IC817 OPTICAL OUT
CN801
CN802
CN803
BEAD

— + B LINE
– – – – B LINE
SIGNAL LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

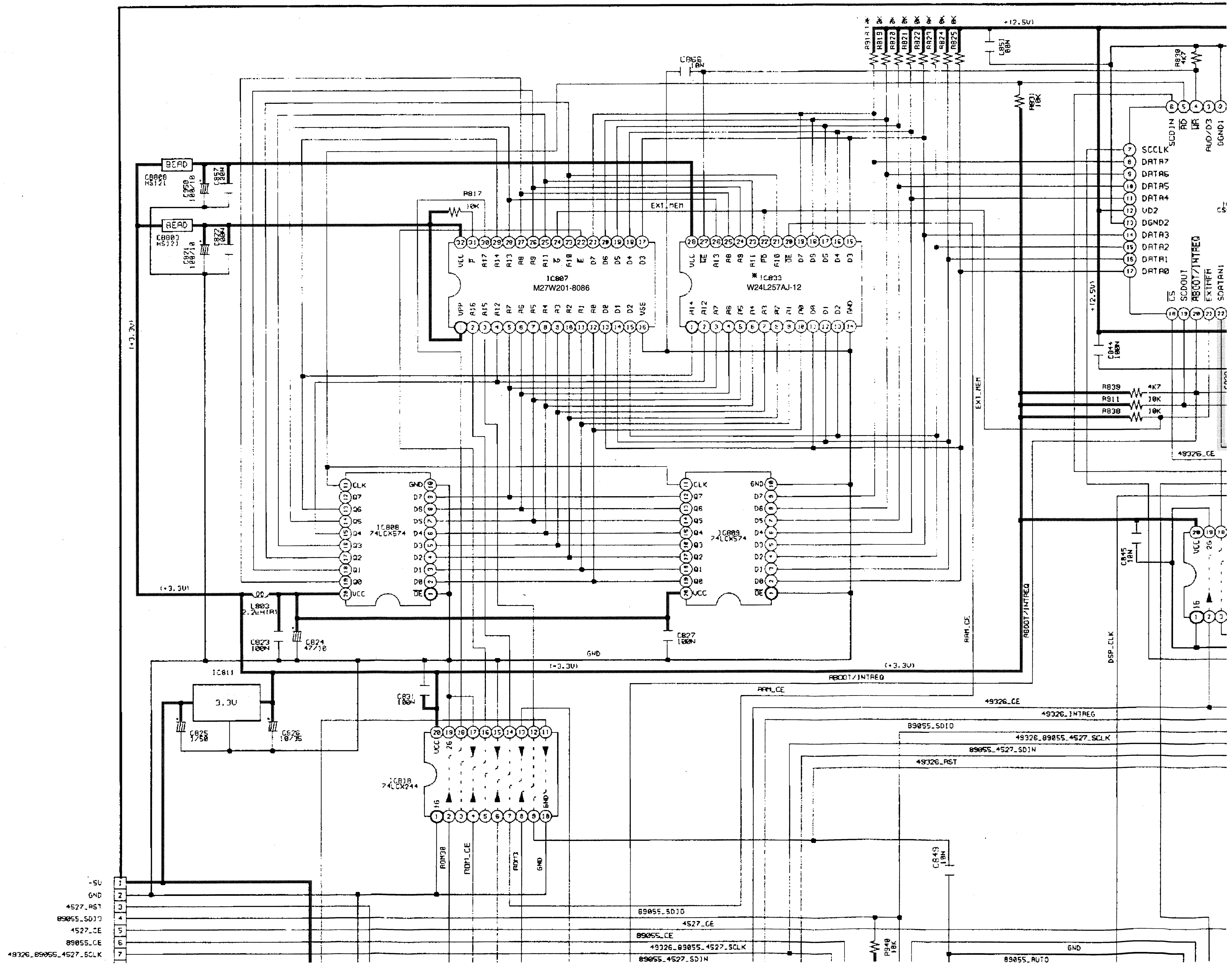
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (2/8)
DSP UNIT

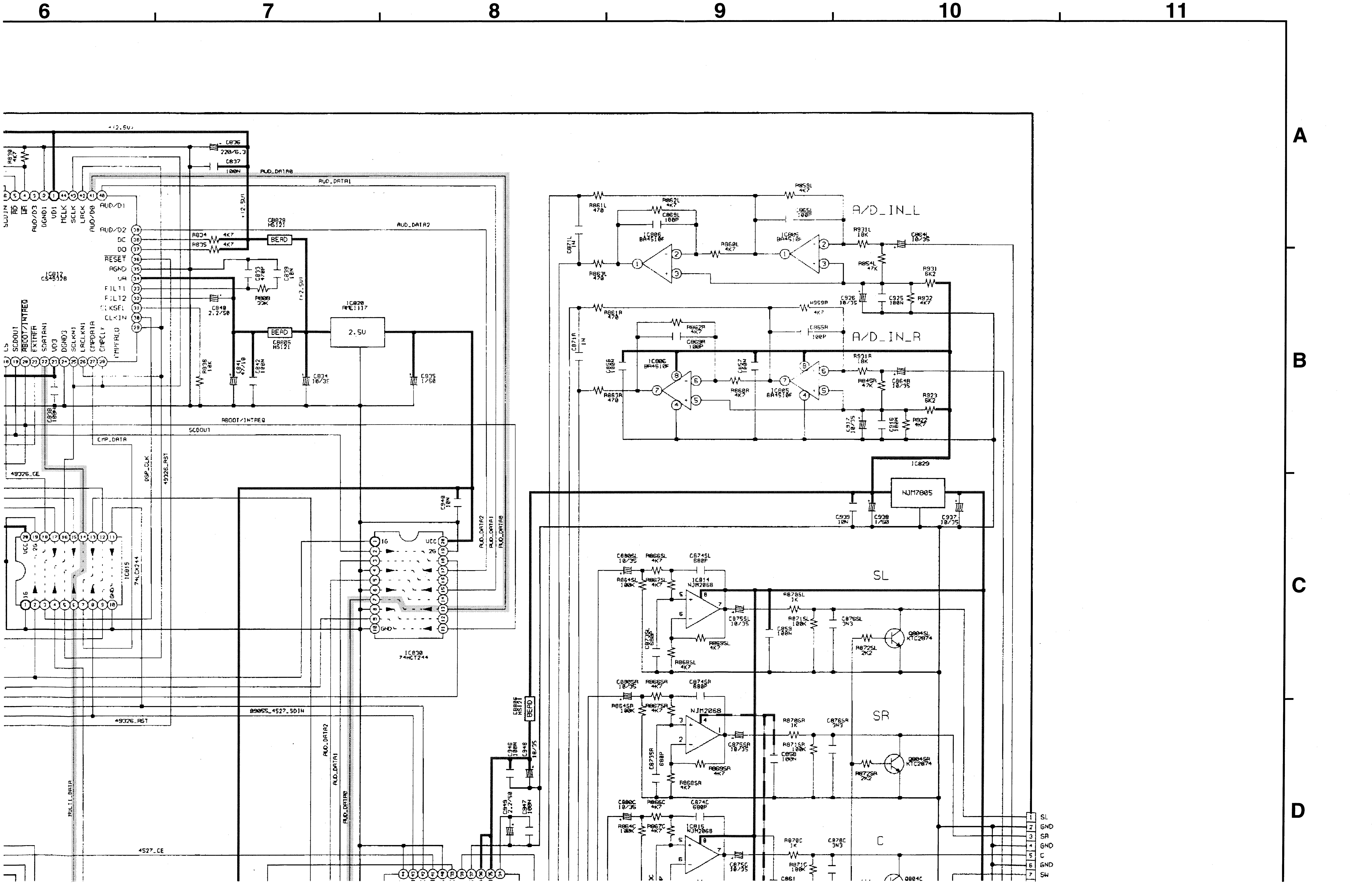
# SCHEMATIC DIAGRAMS (2/8)

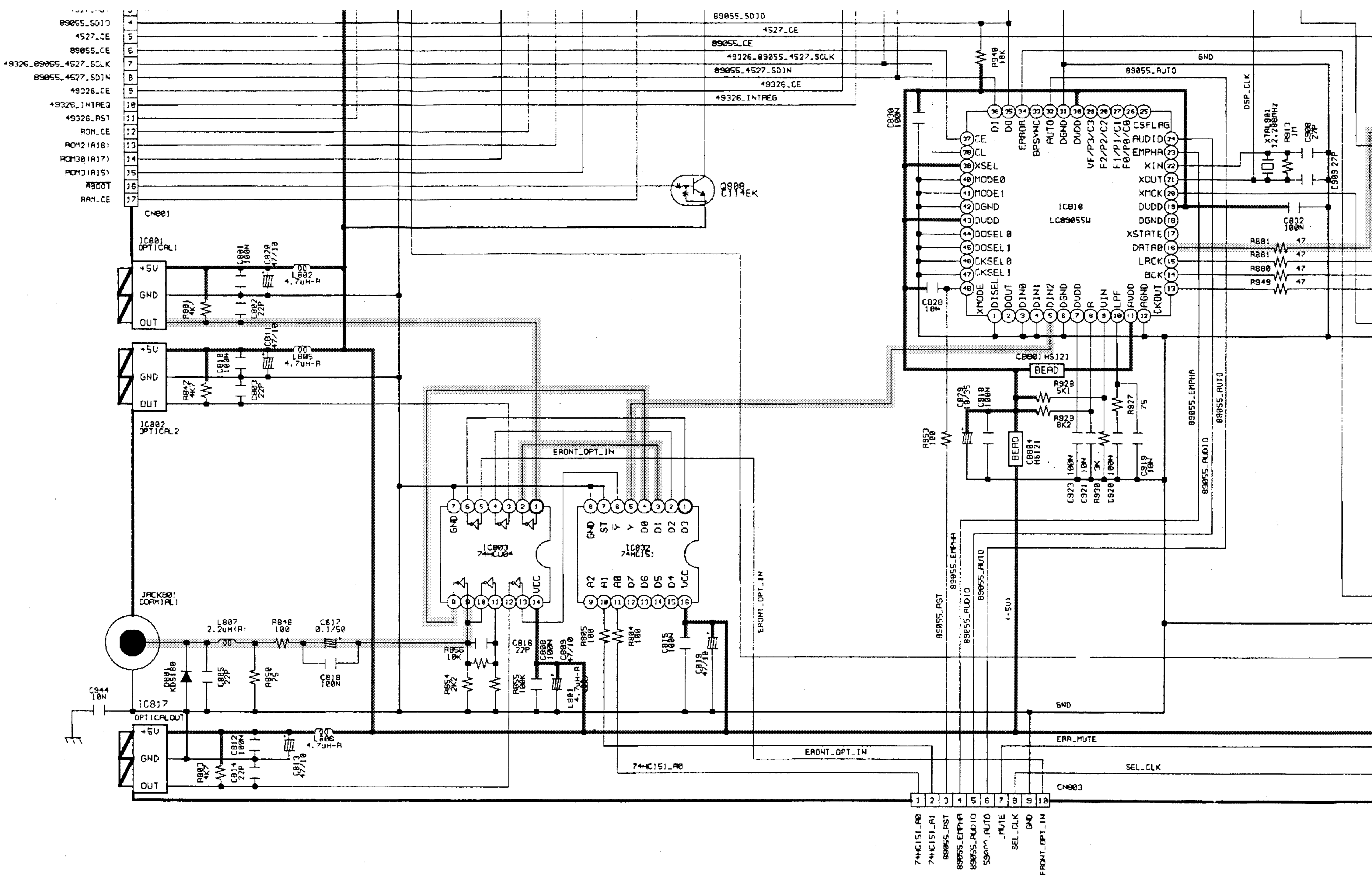
1 2 3 4 5 6

| | IC812 | IC833 |
|---|---|---|
| - N | CS49329 | W24L257AJ-12 |
| E3, E2, E1, E1H, E1T, E1C | CS49326 | |

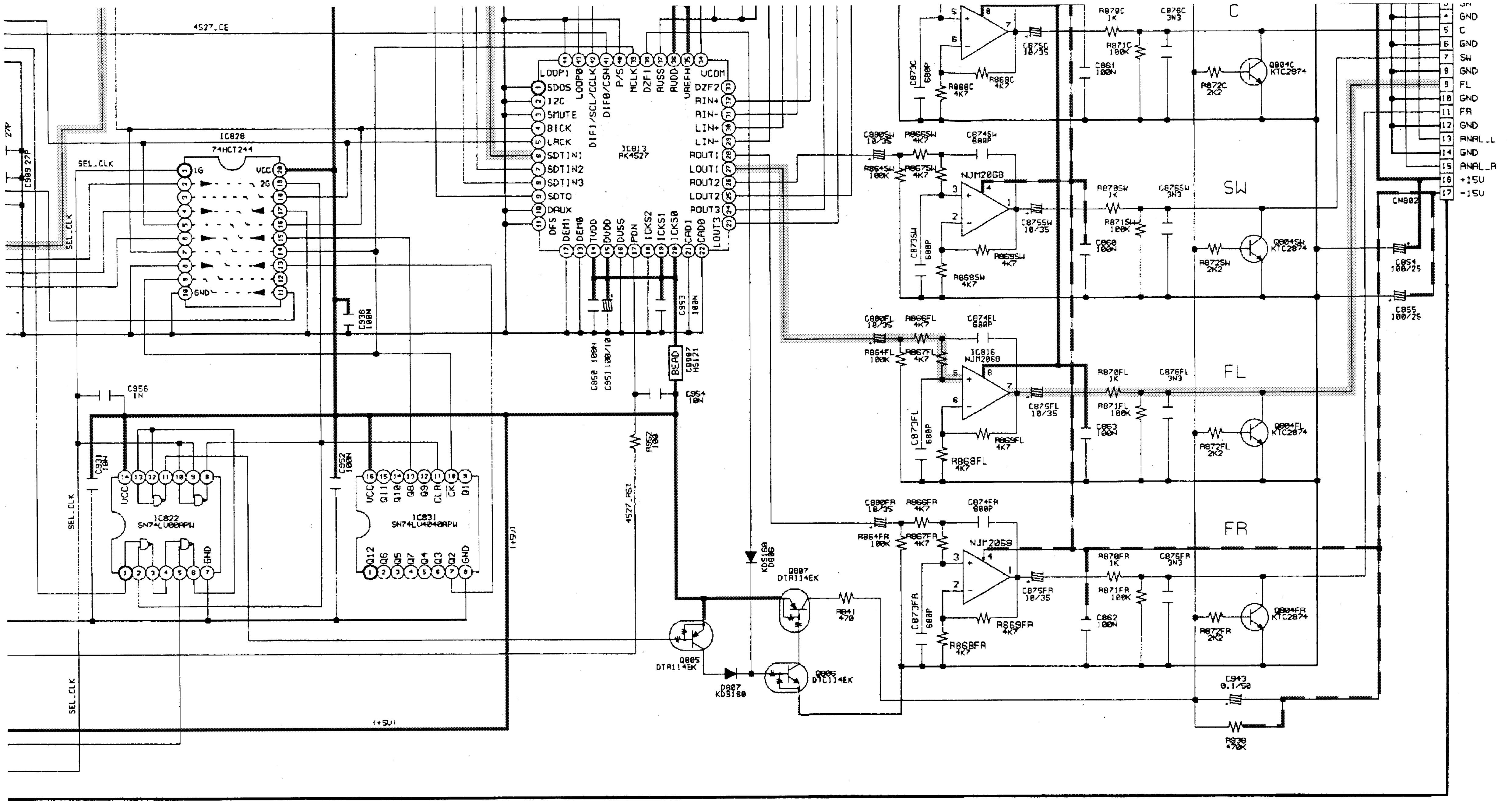


IC807
M27W201-8086
VCC
A17
A14
A13
A8
A9
A11
A18
D7
D6
D5
D4
D3
VPP
A16
A15
A12
A7
A6
A5
A4
A3
A2
A1
A0
D0
D1
D2
VSS
※ IC833
W24L257AJ-12
GND
R817
10K
EXT_MEM
BEAD
C808
MS121
C820
100/10
C821
100/10
C822
C823
100N
C824
47/10
C827
100N
C831
100N
C825
1/50
C826
10/35
C856
10N
C851
C844
100N
C845
10N
C849
10N
IC808
74LCX574
IC809
74LCX574
CLK
Q7
Q6
Q5
Q4
Q3
Q2
Q1
Q0
D7
D6
D5
D4
D3
D2
D1
D0
OE
VCC
L803
2.2uH(R1)
(+3.3V)
IC811
3.3V
IC818
74LCX244
ROM30
ROM_CE
ROM3
GND
(+2.5V)
R818
R819
R820
R821
R822
R823
R824
R825
R801
10K
R830
4K7
R839
4K7
R811
10K
R838
10K
R840
10K
SCCLK
DATA7
DATA6
DATA5
DATA4
VD2
DGND2
DATA3
DATA2
DATA1
DATA0
SCDIN
RD
WR
AVD/D3
DGND1
CS
SCDOUT
ABOOT/INTREQ
EXTMEM
SDATAN1
49326_CE
RAM_CE
ABOOT/INTREQ
DSP_CLK
EXT_MEM
49326_INTREQ
89055_SDIO
49326_89055_4527_SCLK
89055_4527_SDIN
49326_RST
4527_CE
89055_CE
89055_AUTO
-5V
GND
4527_RST
89055_SDIO
4527_CE
89055_CE
49326_89055_4527_SCLK
1
2
3
4
5
6
7


6
7
8
9
10
11
A
B
C
D
(+2.5V)
C836 220/6.3
C837 100N
AUD_DATA1A0
AUD_DATA1
AUD_DATA2
AUD/D1
AUD/D2
DC
DO
RESET
AGND
VA
FILT1
FILT2
CLKSEL
CLKIN
IC812 CS49326
R834 4K7
R835 4K7
C8020 HS121
BEAD
C833 470P
C839 10N
R808 33K
C840 2.2/50
IC820 AME1117
2.5V
C8805 HS121
R836 10K
C841 47/10
C842 100N
C834 10/35
C835 1/50
ABOOT/INTREQ
SCDOUT
CMP_DATA
DSP_CLK
49326_RST
49326_CE
IC815 74LCX244
C940 10N
IC830 74HCT244
VCC
GND
AUD_DATA2
AUD_DATA1
AUD_DATA0
89055_4527_SDIN
49326_RST
MULTI_DATA
4527_CE
C8806 HS121
BEAD
C946 100N
C948 10/35
C949 2.2/50
C947 100N
R861L 470
R862L 4K7
C869L 100P
IC806 BA4510F
R863L 470
C871L 1N
R860L 4K7
IC805 BA4510F
R859L 4K7
C865L 100P
A/D_IN_L
R931L 10K
C864L 10/35
R854L 47K
R931 6K2
C926 10/35
C925 100N
R932 4K7
R861R 470
R862R 4K7
C869R 100P
C871R 1N
C856 100N
IC806 BA4510F
R863R 470
R860R 4K7
C857 100N
IC805 BA4510F
R859R 4K7
C865R 100P
A/D_IN_R
R931R 10K
R845R 47K
C864R 10/35
R923 6K2
C917 10/35
C916 100N
R922 4K7
IC829
NJM7805
C939 10N
C938 1/50
C937 10/35
C880SL 10/35
R866SL 4K7
C874SL 680P
R864SL 100K
R867SL 4K7
IC814 NJM2068
SL
C875SL 10/35
R870SL 1K
R871SL 100K
C876SL 3N3
C859 100N
C873SL 680P
R869SL 4K7
R868SL 4K7
R872SL 2K2
Q804SL KTC2874
C880SR 10/35
R866SR 4K7
C874SR 680P
R864SR 100K
R867SR 4K7
NJM2068
SR
R870SR 1K
C876SR 3N3
C875SR 10/35
R871SR 100K
C858 100N
C873SR 680P
R869SR 4K7
R868SR 4K7
R872SR 2K2
Q804SR KTC2874
C880C 10/35
R866C 4K7
C874C 680P
R864C 100K
R867C 4K7
IC815 NJM2068
C
R870C 1K
C878C 3N3
C875C 10/35
R871C 100K
C861
Q804C
1 SL
2 GND
3 SR
4 GND
5 C
6 GND
7 SW


89055_SDIO
4527_CE
89055_CE
49326_89055_4527_SCLK
89055_4527_SDIN
49326_CE
49326_INTREQ
49326_RST
ROM_CE
ROM2(A16)
ROM30(A17)
ROM3(A15)
RBOOT
RAM_CE
CN801
IC801 OPTICAL1
+5V
GND
OUT
L802 4.7uH-R
C801 100N
C820 47/10
C802 22P
R801 4K7
IC802 OPTICAL2
L805 4.7uH-R
C818 100N
C811 47/10
C803 22P
R847 4K7
JACK801 COAXIAL1
L807 2.2uH(R)
R846 100
C817 0.1/50
C810 100N
C805 22P
R850 75
D801 KDS160
C844 10N
IC817 OPTICALOUT
C812 100N
C814 22P
R803 4K7
C813 47/10
L806 4.7uH-R
IC803 74HCU04
IC802 74HC151
GND
ST
Y
D0
D1
D2
D3
A2
A1
A0
D7
D6
D5
D4
VCC
FRONT_OPT_IN
R856 10K
R854 2K2
R855 100K
C816 22P
C808 100N
C809 47/10
L801 4.7uH-R
R805 100
R804 100
C815 100N
C819 47/10
Q808 DTC114EK
IC810 LC89055W
DI
DO
ERROR
BPSYNC
AUTO
DGND
DVDD
VF/P3/C3
F2/P2/C2
F1/P1/C1
F0/P0/C0
CSFLAG
AUDIO
EMPHA
XIN
XOUT
XMCK
DVDD
DGND
XSTATE
DATA0
LRCK
BCK
CKOUT
CE
CL
XSEL
MODE0
MODE1
DGND
DVDD
DOSEL0
DOSEL1
CKSEL0
CKSEL1
XMODE
DISEL
DOUT
DIN0
DIN1
DIN2
DGND
DVDD
R
VIN
LPF
AVDD
AGND
C830 100N
R940 10K
C820 10N
89055_AUTO
GND
DSP_CLK
XTAL801 12.288MHz
R813 1M
C808 27P
C809 27P
C832 100N
R881 47
R861 47
R880 47
R949 47
CB801 HS121
BEAD
R928 5K1
R929 8K2
R927 75
R953 100
C879 10/35
C918 100N
CB804 HS121
C923 100N
C921 10N
R930 3K
C920 100N
C919 10N
89055_EMPHA
89055_AUDIO
89055_RST
(+5V)
GND
ERR_MUTE
SEL_CLK
74HC151_A0
CN803
74HC151_A0
74HC151_A1
89055_RST
89055_EMPHA
89055_AUDIO
59000_AUTO
_MUTE
SEL_CLK
GND
FRONT_OPT_IN

NOTICE
ALL RESISTANCE VAL
ALL CAPACITANCE VA
EACH VOLTAGE AND C
CONDITION.
CIRCUIT AND PARTS A
NOTICE.


4527_CE
IC828
74HCT244
SEL_CLK
C909 27P
IC813
AK4527
LOOP1
SDOS
I2C
SMUTE
BICK
LRCK
SDTIN1
SDTIN2
SDTIN3
SDTO
DAUX
DFS
DEM1
DEM0
TVDD
DVDD
DVSS
PDN
ICKS2
ICKS1
ICKS0
CAD1
CAD0
LOOP0
DIF1/SCL/CCLK
DIF0/CSN
P/S
MCLK
DZF1
AVSS
AVDD
VREFH
VCOM
DZF2
RIN+
RIN-
LIN+
LIN-
ROUT1
LOUT1
ROUT2
LOUT2
ROUT3
LOUT3
C936 100N
C950 100N
C951 100/10
C953 100N
BEAD
C8007 HS121
C954 10N
C956 1N
C937 10N
IC822
SN74LV00APW
C952 100N
IC831
SN74LV4040APW
VCC
GND
Q11
Q10
Q8
Q9
CLR
CK
Q1
Q12
Q6
Q5
Q7
Q4
Q3
Q2
(+5V)
4527_RST
R952 100
KDS160 D806
Q807 DTA114EK
R841 470
Q805 DTA114EK
D807 KDS160
Q806 DTC114EK
IC816 NJM2068
NJM2068
C
SW
FL
FR
R870C 1K
C876C 3N3
C875C 10/35
R871C 100K
C861 100N
C873C 680P
R868C 4K7
R869C 4K7
R872C 2K2
Q804C KTC2874
C880SW 10/35
R866SW 4K7
C874SW 680P
R864SW 100K
R867SW 4K7
R870SW 1K
C876SW 3N3
C875SW 10/35
R871SW 100K
C860 100N
C873SW 680P
R869SW 4K7
R868SW 4K7
R872SW 2K2
Q804SW KTC2874
C880FL 10/35
R866FL 4K7
C874FL 680P
R864FL 100K
R867FL 4K7
R870FL 1K
C876FL 3N3
C875FL 10/35
R871FL 100K
C863 100N
C873FL 680P
R869FL 4K7
R868FL 4K7
R872FL 2K2
Q804FL KTC2874
C880FR 10/35
R866FR 4K7
C874FR 680P
R864FR 100K
R867FR 4K7
R870FR 1K
C876FR 3N3
C875FR 10/35
R871FR 100K
C862 100N
C873FR 680P
R869FR 4K7
R868FR 4K7
R872FR 2K2
Q804FR KTC2874
C854 100/25
C855 100/25
C943 0.1/50
R938 470K
CN802
4 GND
5 C
6 GND
7 SW
8 GND
9 FL
10 GND
11 FR
12 GND
13 ANAL_L
14 GND
15 ANAL_R
16 +15V
17 -15V
(+5V)
E
F
G
H

———— + B LINE

— — — — − B LINE

▨ SIGNAL LINE

CE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
NCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

## WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

## CAUTION:

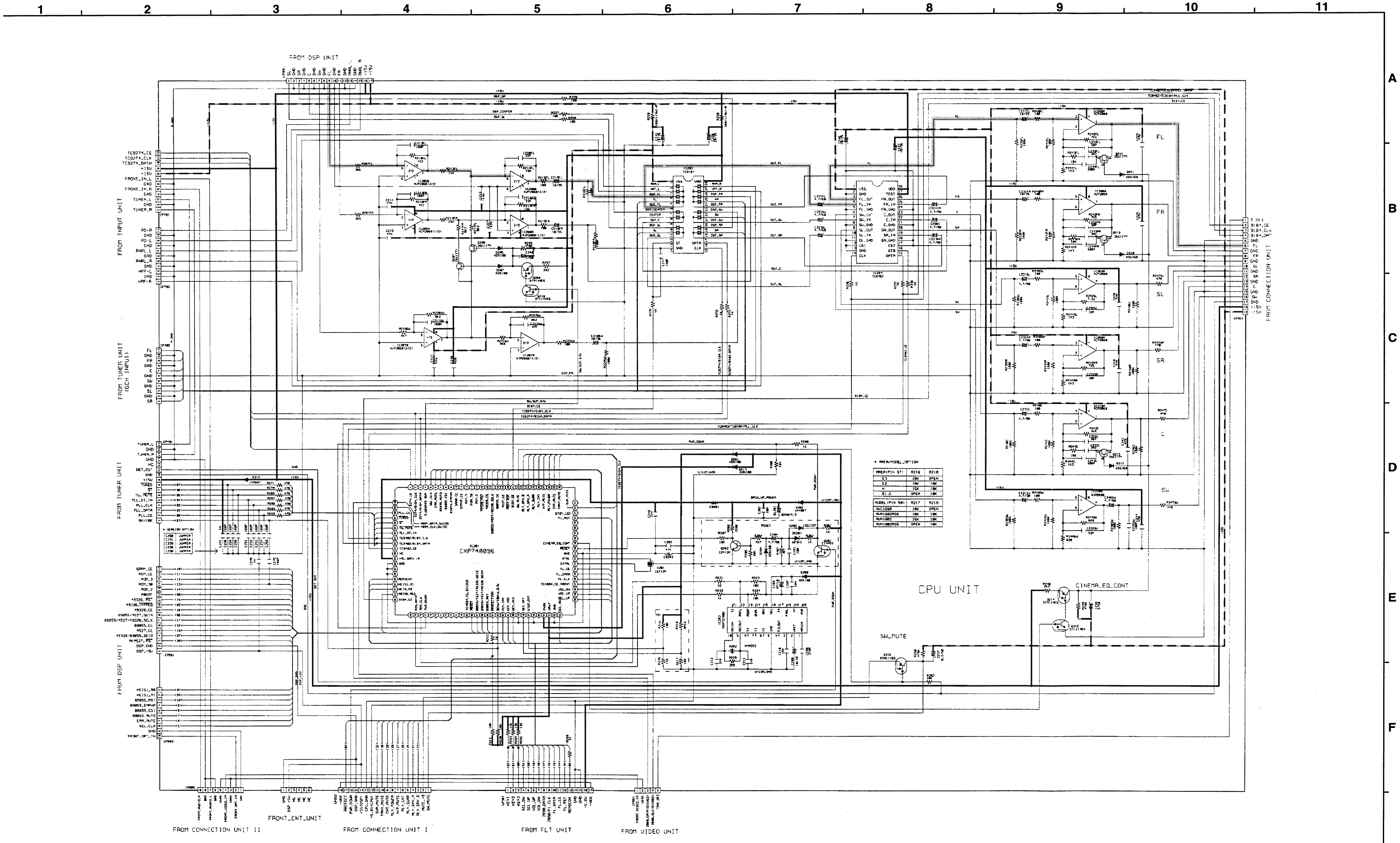
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

## WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

# SCHEMATIC DIAGRAMS (2/8)
## DSP UNIT

## SCHEMATIC DIAGRAMS (3/8)


1
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A
B
C
D
E
F
G
H
FROM DSP UNIT
FROM INPUT UNIT
FROM TUNER UNIT (6CH INPUT)
FROM TUNER UNIT
FROM DSP UNIT
FROM CONNECTION UNIT
FROM CONNECTION UNIT II
FRONT_CNT_UNIT
FROM CONNECTION UNIT I
FROM FLT UNIT
FROM VIDEO UNIT
IC201
CXP740096
CPU UNIT
SW_MUTE
CINEMA_EQ_CONT
FL
FR
SL
SR
C
SW

* AREA/MODEL_OPTION

| AREA(PIN 57) | R216 | R218 |
|---|---|---|
| E3 | 10K | OPEN |
| E2 | 10K | 10K |
| N | 15K | 10K |
| E1,C | OPEN | 10K |

| MODEL(PIN 58) | R217 | R219 |
|---|---|---|
| AVC1550 | 10K | OPEN |
| AVR1602RDS | 10K | 10K |
| AVR1802 | 15K | 10K |
| AVR1802RDS | OPEN | 10K |

——— + B LINE
– – – – – B LINE
▨ SIGNAL LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

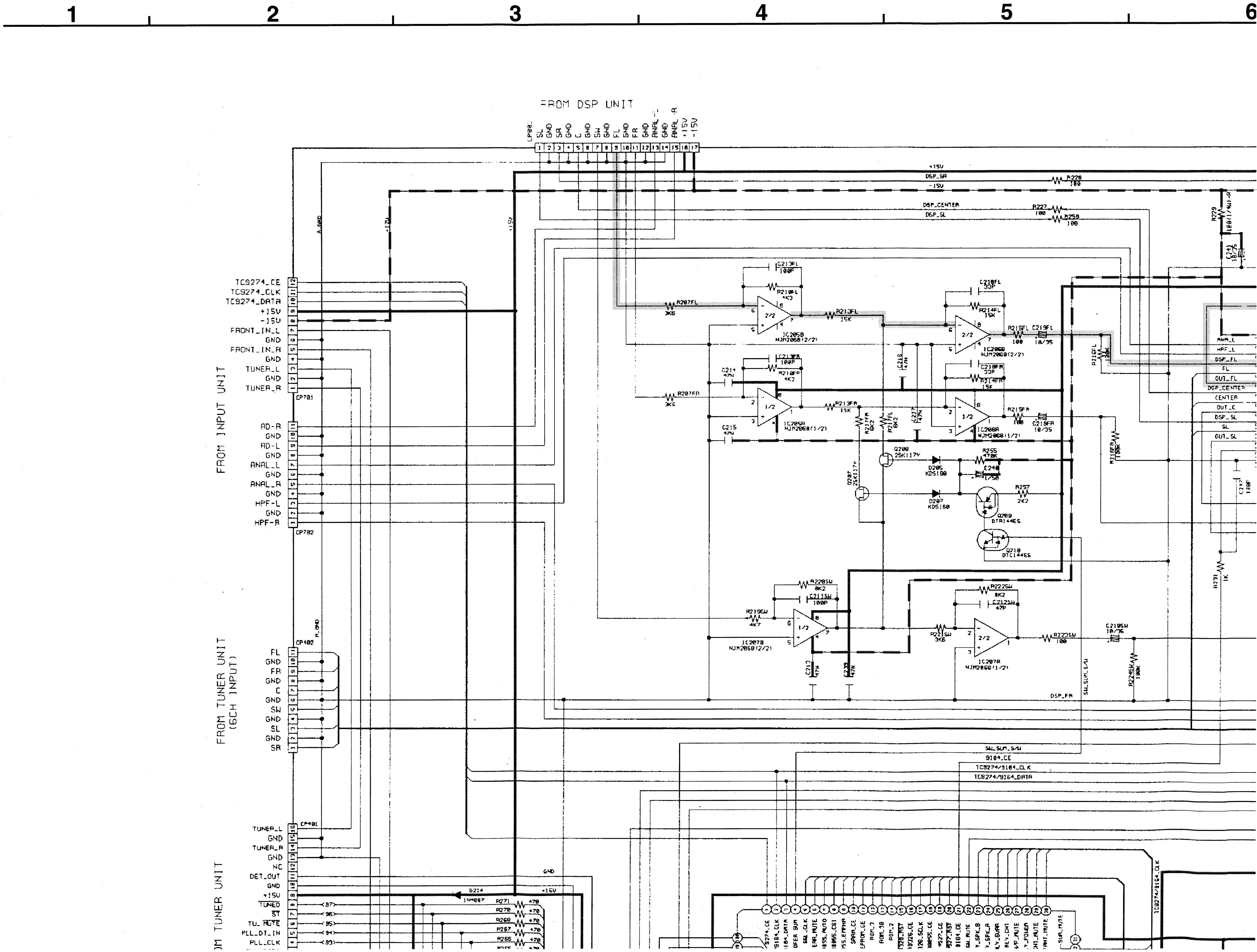
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

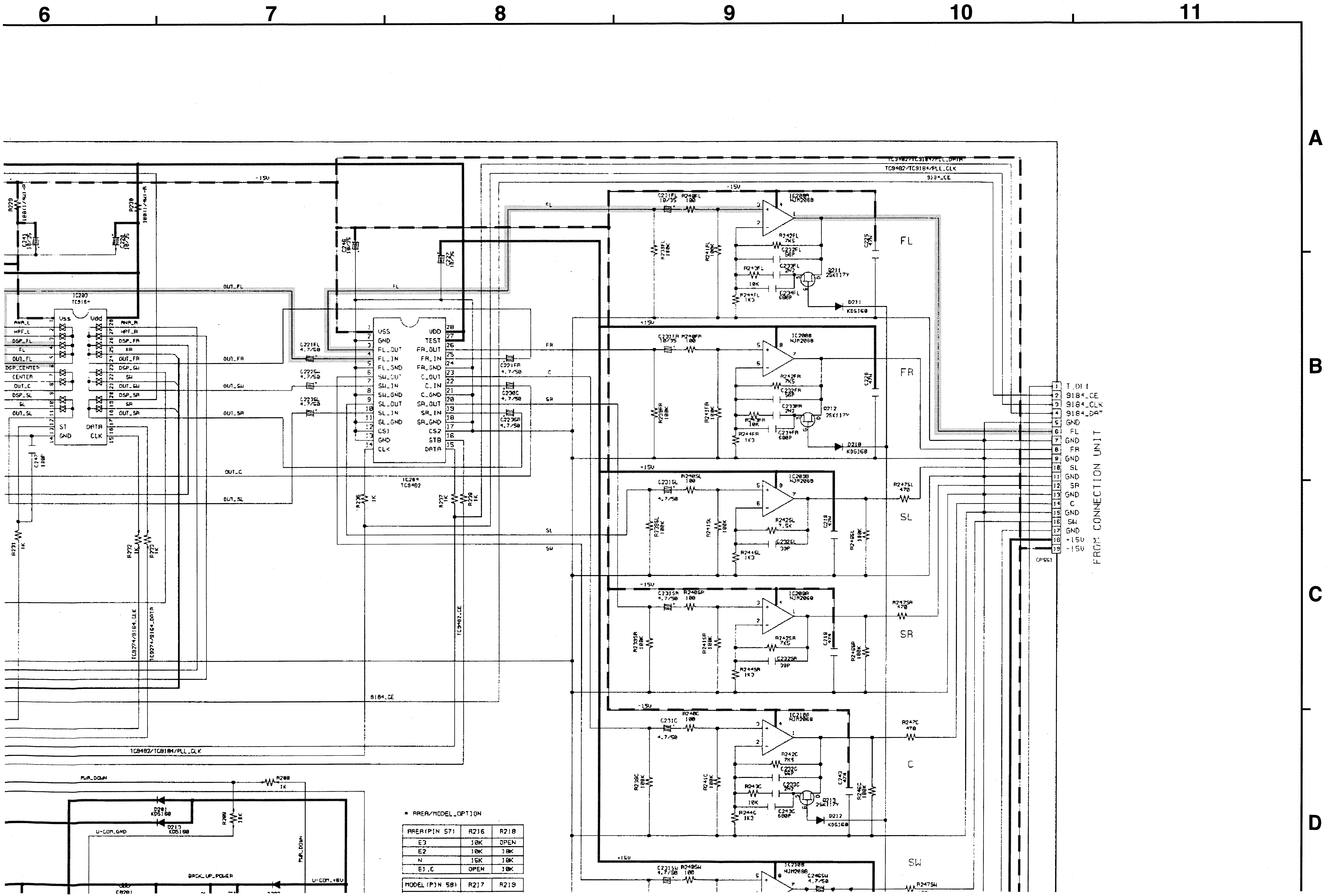
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (3/8)
CPU UNIT

# SCHEMATIC DIAGRAMS (3/8)



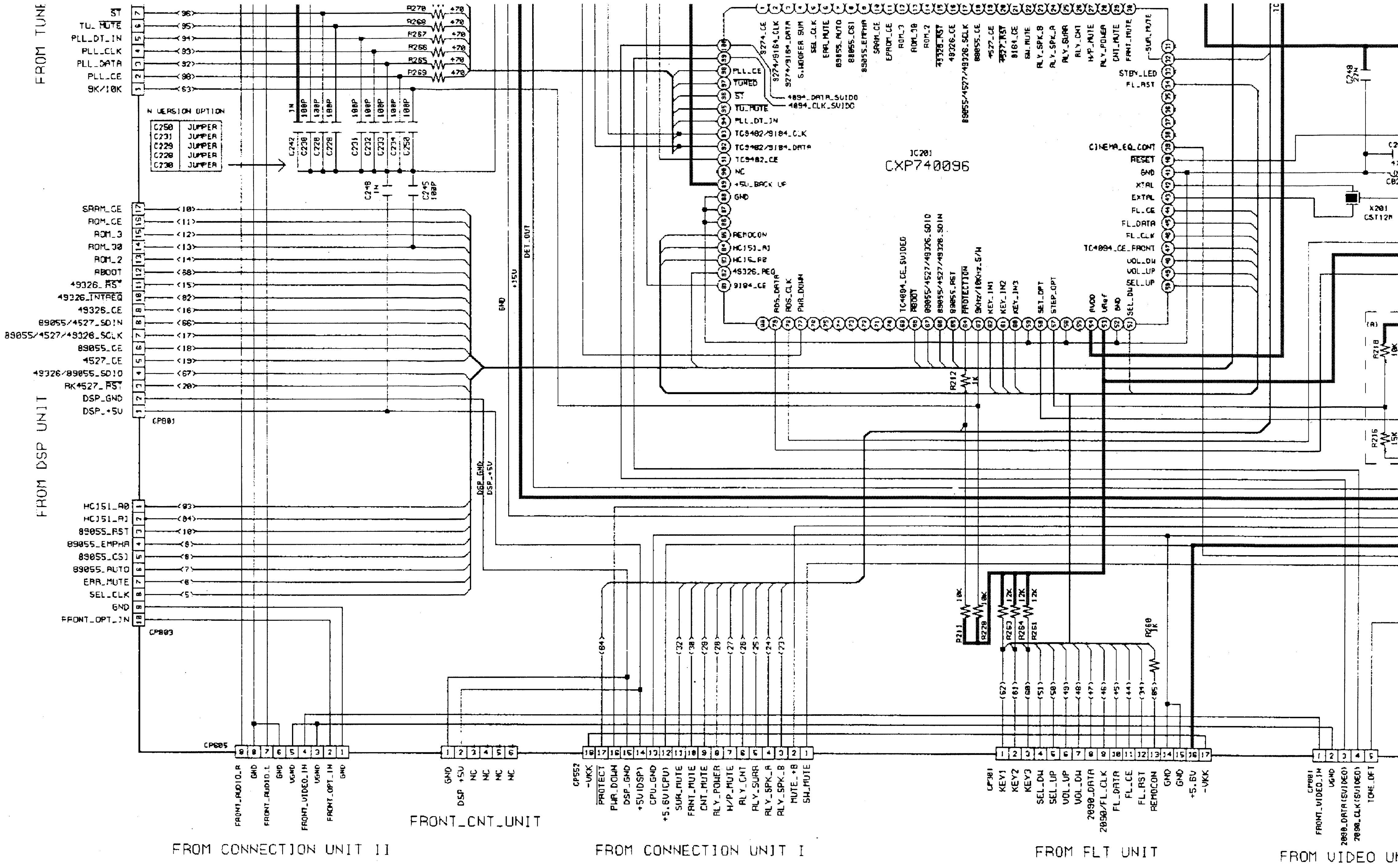
1
2
3
4
5
6
FROM DSP UNIT
CP802
SL
GND
SR
GND
C
GND
SW
GND
FL
GND
FR
GND
ANAL_L
GND
ANAL_R
+15V
-15V
+15V
DSP_SR
-15V
R228 100
DSP_CENTER
R227 100
DSP_SL
R258 100
R229
A_GND
-12V
+15V
TC9274_CE
TC9274_CLK
TC9274_DATA
+15V
-15V
FRONT_IN_L
GND
FRONT_IN_R
GND
TUNER_L
GND
TUNER_R
CP701
FROM INPUT UNIT
AD-R
GND
AD-L
GND
ANAL_L
GND
ANAL_R
GND
HPF-L
GND
HPF-R
CP702
C213FL 100P
R210FL 4K7
R207FL 3K6
IC205B NJM2068(2/2)
R213FL 15K
C218FL 33P
R214FL 15K
IC206B NJM2068(2/2)
R215FL 100
C219FL 10/35
R216FL 30K
C213FR 100P
R210FR 4K7
C214 47N
R207FR 3K6
IC205A NJM2068(1/2)
R213FR 15K
C215 47N
C216 47N
R217FR 6K2
R217FL 6K2
C217 47N
C218FR 33P
R214FR 15K
IC206A NJM2068(1/2)
R215FR 100
C219FR 10/35
R216FR 100K
Q208 2SK117Y
Q207 2SK117Y
D205 KDS160
D207 KDS160
R255 470K
C240 1/50
R257 2K2
Q209 DTA144ES
Q210 DTC144ES
ANA_L
HPF_L
DSP_FL
FL
OUT_FL
DSP_CENTER
CENTER
OUT_C
DSP_SL
SL
OUT_SL
R231 1K
R220SW 8K2
C211SW 100P
R219SW 4K7
IC207B NJM2068(2/2)
C212 47N
C239 47N
R222SW 8K2
C212SW 47P
R221SW 3K6
IC207A NJM2068(1/2)
R223SW 100
C219SW 10/35
R224SW 100K
SW_SUM_S/W
DSP_FR
FROM TUNER UNIT (6CH INPUT)
CP402
FL
GND
FR
GND
C
GND
SW
GND
SL
GND
SR
SW_SUM_S/W
9164_CE
TC9274/9164_CLK
TC9274/9164_DATA
TC9274/9164_CLK
CP401
TUNER_L
GND
TUNER_R
GND
NC
DET_OUT
GND
+15V
TUNED
ST
TU_MUTE
PLL_DI_IN
PLL_CLK
FROM TUNER UNIT
GND
D214 1N4007
+15V
R271 470
R270 470
R268 470
R267 470
R266 470
(87)
(96)
(95)
(94)
(93)


6
7
8
9
10
11
A
B
C
D
IC203
TC9164
Vss
Vdd
ANA_L
HPF_L
DSP_FL
FL
OUT_FL
DSP_CENTER
CENTER
OUT_C
DSP_SL
SL
OUT_SL
ANA_R
HPF_R
DSP_FR
FR
OUT_FR
DSP_SW
SW
OUT_SW
DSP_SR
SR
OUT_SR
ST
GND
DATA
CLK
IC204
TC9482
VSS
VDD
GND
TEST
FL_OUT
FR_OUT
FL_IN
FR_IN
FL_GND
FR_GND
SW_OUT
C_OUT
SW_IN
C_IN
SW_GND
C_GND
SL_OUT
SR_OUT
SL_IN
SR_IN
SL_GND
SR_GND
CS1
CS2
STB
-15V
+15V
IC208A
NJM2068
IC208B
NJM2068
IC209B
NJM2068
IC209A
NJM2068
IC210A
NJM2068
IC210B
NJM2068
Q211
2SK117Y
Q212
2SK117Y
Q213
2SK117Y
D211
KDS160
D210
KDS160
D212
KDS160
D201
KDS160
D213
KDS160
FL
FR
SL
SR
C
SW
TC9482/TC9184/PLL_DATA
TC9482/TC9184/PLL_CLK
9184_CE
TC9274/9164_CLK
TC9274/9164_DATA
TC9482_CE
PWR_DOWN
U-COM_GND
BACK_UP_POWER
U-COM_+6V
T_DET
9184_CE
9184_CLK
9184_DAT
GND
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
GND
+15V
-15V
CP551
FROM CONNECTION UNIT

* AREA/MODEL_OPTION

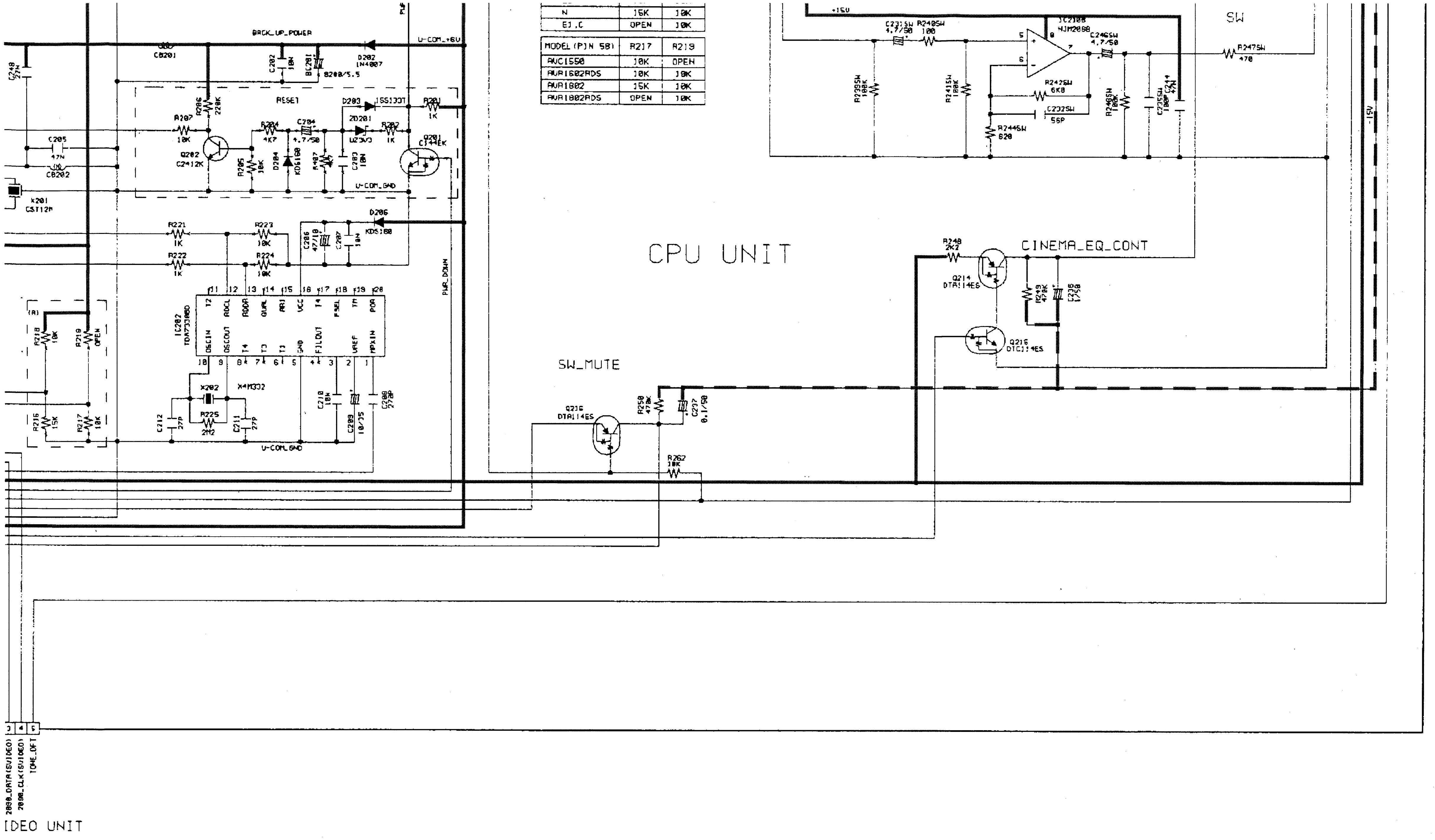
| AREA(PIN 57) | R216 | R218 |
|---|---|---|
| E3 | 10K | OPEN |
| E2 | 10K | 10K |
| N | 15K | 10K |
| E1,C | OPEN | 10K |

| MODEL(PIN 58) | R217 | R219 |
|---|---|---|


FROM TUNE
ST
TU_MUTE
PLL_DT_IN
PLL_CLK
PLL_DATA
PLL_CE
9K/10K
N VERSION OPTION
C250 JUMPER
C231 JUMPER
C229 JUMPER
C228 JUMPER
C230 JUMPER
R270
R268
R267
R266
R265
R269
470
FROM DSP UNIT
SRAM_CE
ROM_CE
ROM_3
ROM_30
ROM_2
ABOOT
49326_RST
49326_INTREQ
49326_CE
89055/4527_SDIN
89055/4527/49326_SCLK
89055_CE
4527_CE
49326/89055_SDIO
AK4527_RST
DSP_GND
DSP_+5V
CP801
HC151_A0
HC151_A1
89055_RST
89055_EMPHA
89055_CS1
89055_AUTO
ERR_MUTE
SEL_CLK
GND
FRONT_OPT_IN
CP803
DSP_GND
DSP_+5V
GND
+15V
DET_OUT
IC201
CXP740096
PLL_CE
TUNED
ST
TU_MUTE
PLL_DT_IN
TC9482/9184_CLK
TC9482/9184_DATA
TC9482_CE
NC
+5V_BACK UP
GND
REMOCON
HC151_A1
HC151_A0
49326_REQ
9184_CE
4094_DATA_SVIDO
4094_CLK_SVIDO
STBY_LED
FL_RST
CINEMA_EQ_CONT
RESET
GND
XTAL
EXTAL
FL_CE
FL_DATA
FL_CLK
TC4094_CE_FRONT
VOL_DW
VOL_UP
SEL_DW
SEL_UP
SW_MUTE
X201
CST12M
RDS_DATA
RDS_CLK
PWR_DOWN
TC4094_CE_SVIDEO
ABOOT
PROTECTION
KEY_IN1
KEY_IN2
KEY_IN3
SET_OPT
STEP_OPT
AVDD
VRef
R212
R211
R278
R263
R264
R261
R260
R218
R216
C248
CP805
FRONT_AUDIO_R
GND
FRONT_AUDIO_L
GND
VGND
FRONT_VIDEO_IN
VGND
FRONT_OPT_IN
GND
FROM CONNECTION UNIT II
GND
DSP +5V
NC
NC
NC
NC
FRONT_CNT_UNIT
CP552
-VKK
PROTECT
PWR_DOWN
DSP_GND
+5V(DSP)
CPU_GND
+5.6V(CPU)
SUR_MUTE
FRNT_MUTE
CNT_MUTE
RLY_POWER
H/P_MUTE
RLY_CNT
RLY_SUAR
RLY_SPK_A
RLY_SPK_B
MUTE_+B
SW_MUTE
FROM CONNECTION UNIT I
CP301
KEY1
KEY2
KEY3
SEL_DW
SEL_UP
VOL_UP
VOL_DW
2090_DATA
2090/FL_CLK
FL_DATA
FL_CE
FL_RST
REMOCON
GND
GND
+5.6V
-VKK
FROM FLT UNIT
CP881
FRONT_VIDEO_IN
VGND
2090_DATA(SVIDEO)
2090_CLK(SVIDEO)
TOHE_DFT
FROM VIDEO U

NOTICE

ALL RESISTANCE VAL
ALL CAPACITANCE VA
EACH VOLTAGE AND C
CONDITION.
CIRCUIT AND PARTS A
NOTICE.


PWR
BACK_UP_POWER
U-COM_+6V
C248 27N
CB201
C202 10N
BC201 8200/5.5
D202 1N4007
RESET
D203 1SS133T
R201 1K
R206 220K
R207 10K
Q202 C2412K
R204 4K7
C204 4.7/50
ZD201 UZ3V3
R202 1K
Q201 C144EK
R205 10K
D204 KDS160
R407
C203 10N
U-COM_GND
C205 47N
CB202
X201 CST12M
D206 KDS180
R221 1K
R223 10K
R222 1K
R224 10K
C206 47/10
C207 10N
PWR_DOWN
IC202 TDA7330BD
T2
ADCL
ADDR
QUAL
ARI
VCC
T4
FSEL
TM
POR
OSCIN
OSCOUT
T4
T3
T1
GND
FILOUT
VREF
MPXIN
11
12
13
14
15
16
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7
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3
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1
X202 X4M332
R225 2M2
C212 27P
C211 27P
C210 10N
C209 10/35
C208 270P
U-COM_GND
(A)
R218 10K
R219 OPEN
R216 15K
R217 10K
+15V
IC210B NJM2068
C231SW 4.7/50
R240SW 100
5
6
7
8
C246SW 4.7/50
R247SW 470
SW
R239SW 100K
R241SW 100K
R242SW 6K8
C232SW 56P
R244SW 620
R248SW 100K
C235SW 100P
C244 47N
-15V
CPU UNIT
R248 2K2
CINEMA_EQ_CONT
Q214 DTA114ES
R249 470K
C238 1/50
Q215 DTC114ES
SW_MUTE
Q216 DTA114ES
R250 470K
C237 0.1/50
R262 10K
3
4
5
2090_DATA(SVIDEO)
2090_CLK(SVIDEO)
TONE_OFT
IDEO UNIT

|  |  |  |
|---|---|---|
| N | 15K | 10K |
| EJ,C | OPEN | 10K |

| MODEL (PIN 58) | R217 | R219 |
|---|---|---|
| AVC1550 | 10K | OPEN |
| AVR1602RDS | 10K | 10K |
| AVR1802 | 15K | 10K |
| AVR1802RDS | OPEN | 10K |

E

F

G

H

——————— + B LINE

— — — — – B LINE

▨ SIGNAL LINE

WARNING:

Parts marked with this symbol ⚠ ▢ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

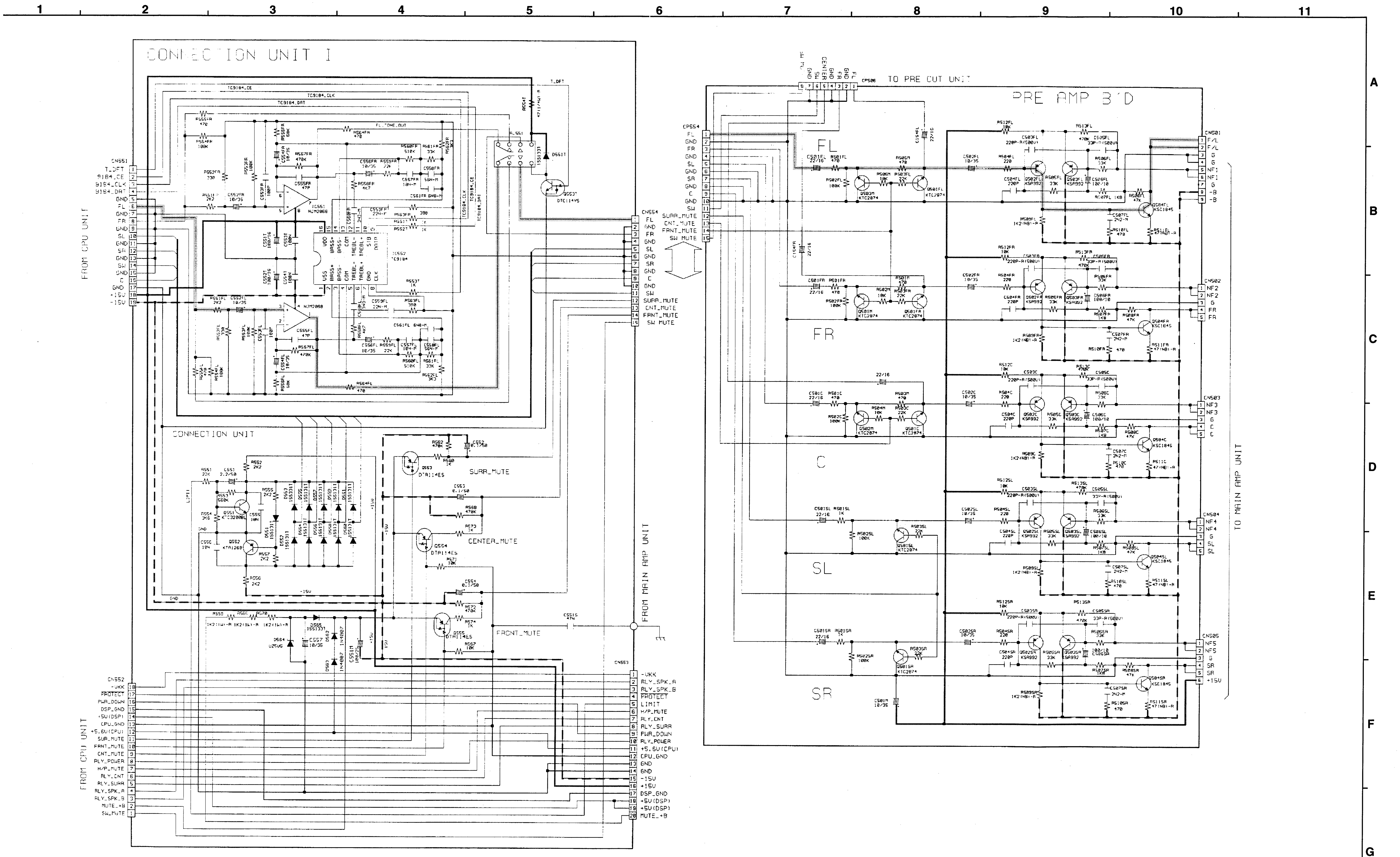
:E VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ICE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

'ARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

## SCHEMATIC DIAGRAMS (3/8)

CPU UNIT

## SCHEMATIC DIAGRAMS (4/8)


1
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A
B
C
D
E
F
CONNECTION UNIT I
CONNECTION UNIT
FROM CPU UNIT
CN551
T_DFT
9184_CE
9184_CLK
9184_DAT
GND
FL
GND
FR
GND
SL
GND
SR
GND
SW
GND
C
GND
+15V
-15V
TC9184_CE
TC9184_CLK
TC9184_DAT
FL_TONE_OUT
IC551 NJM2068
IC552 TC9184
SURR_MUTE
CENTER_MUTE
FRONT_MUTE
DTA114ES
DTC114YS
KTC3200BL
KTA1268
1SS133
UZ6.8
1N4007
CN554
SURR_MUTE
CNT_MUTE
FRNT_MUTE
SW MUTE
FROM MAIN AMP UNIT
CN552
-UKK
PROTECT
PWR_DOWN
DSP_GND
+5V(DSP)
CPU_GND
SUR_MUTE
FRNT_MUTE
CNT_MUTE
RLY_POWER
H/P_MUTE
RLY_CNT
RLY_SURR
RLY_SPK_A
RLY_SPK_B
MUTE_+B
SW_MUTE
CN553
-UKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P_MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
+15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B
CP506
TO PRE CUT UNIT
PRE AMP B'D
CP554
FL
FR
C
SL
SR
SW
FL
FR
C
SL
SR
KTC2874
KSA992
KSC1845
CN501
F/L
F/L
G
G
NF1
NF1
G
-B
-B
CN502
NF2
NF2
G
FR
FR
CN503
NF3
NF3
G
C
C
CN504
NF4
NF4
G
SL
SL
CN505
NF5
NF5
G
SR
SR
+15V
TO MAIN AMP UNIT

——— + B LINE

– – – – – B LINE

▨ SIGNAL LINE

WARNING:
Parts marked with this symbol ⚠▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

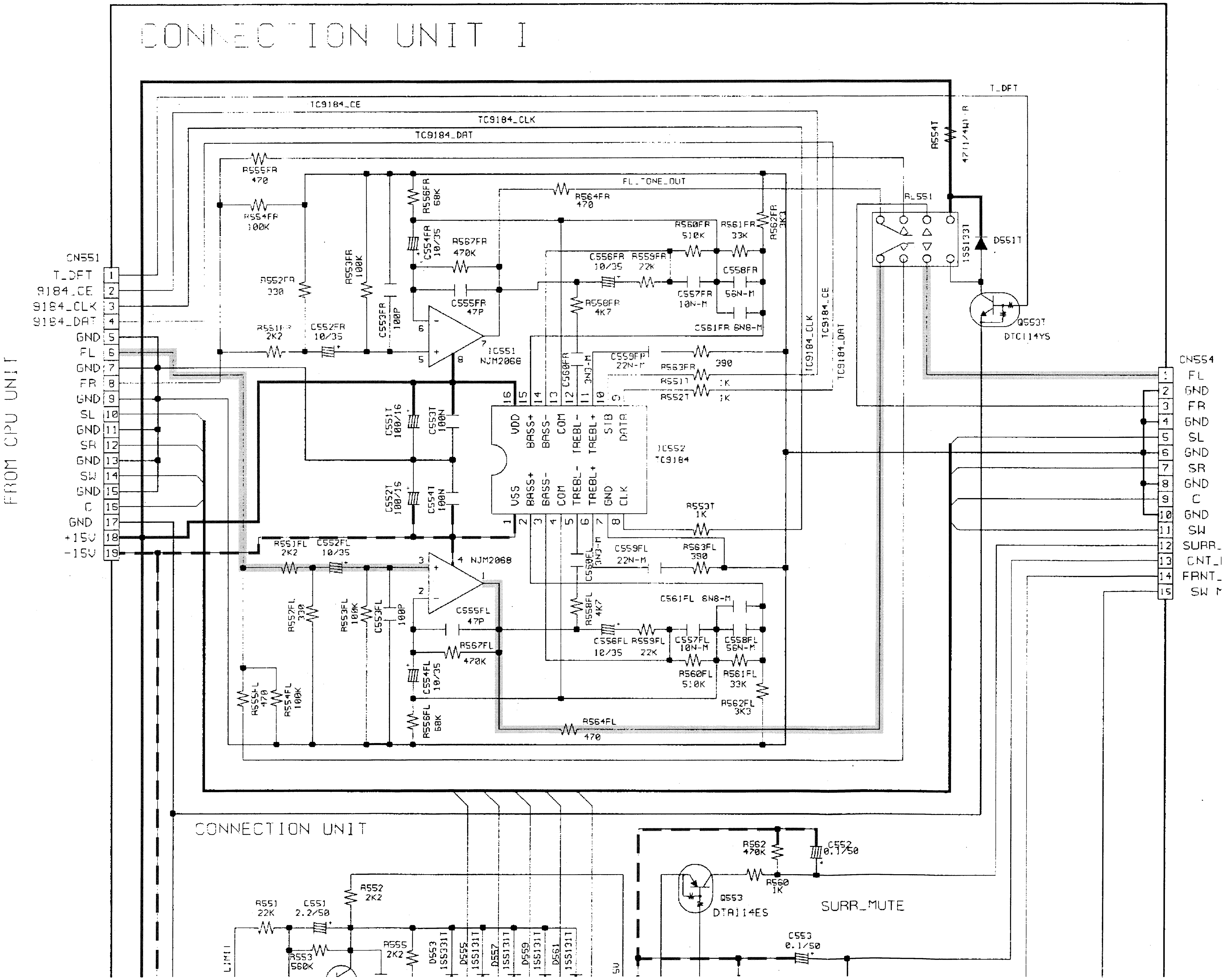
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

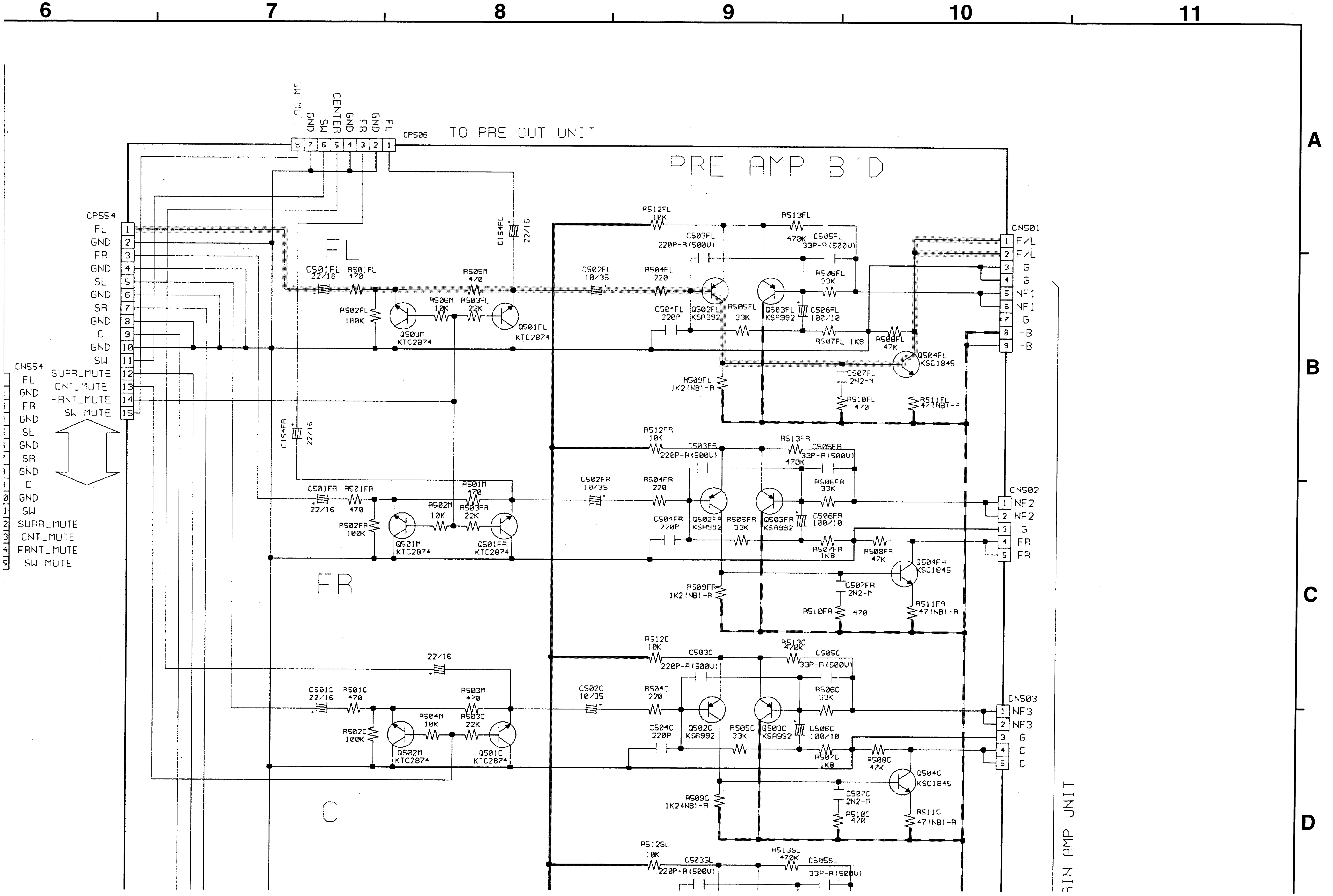
### SCHEMATIC DIAGRAMS (4/8)
CNT UNIT
PRE-AMP UNIT

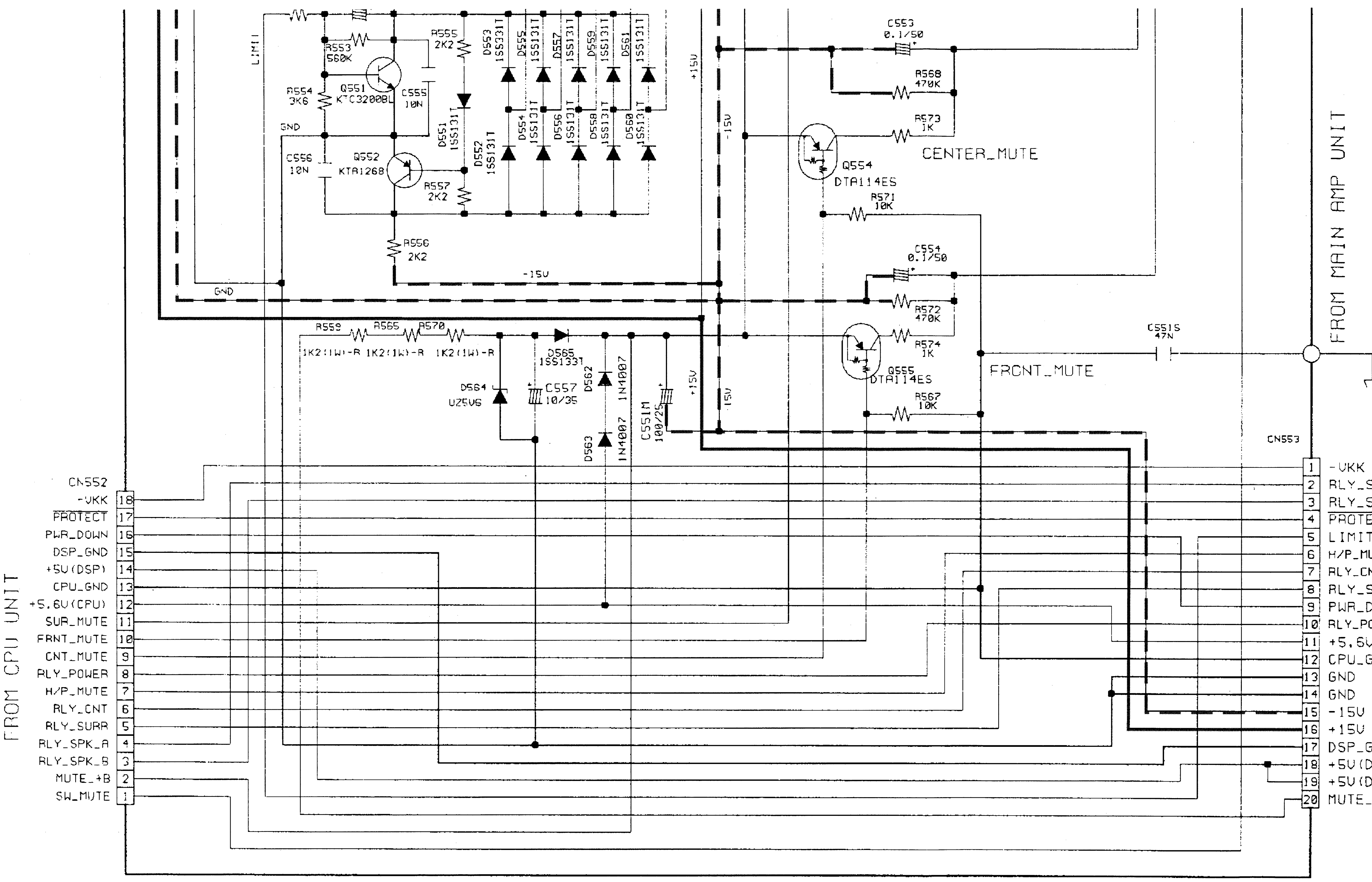
# SCHEMATIC DIAGRAMS (4/8)

1
2
3
4
5
6



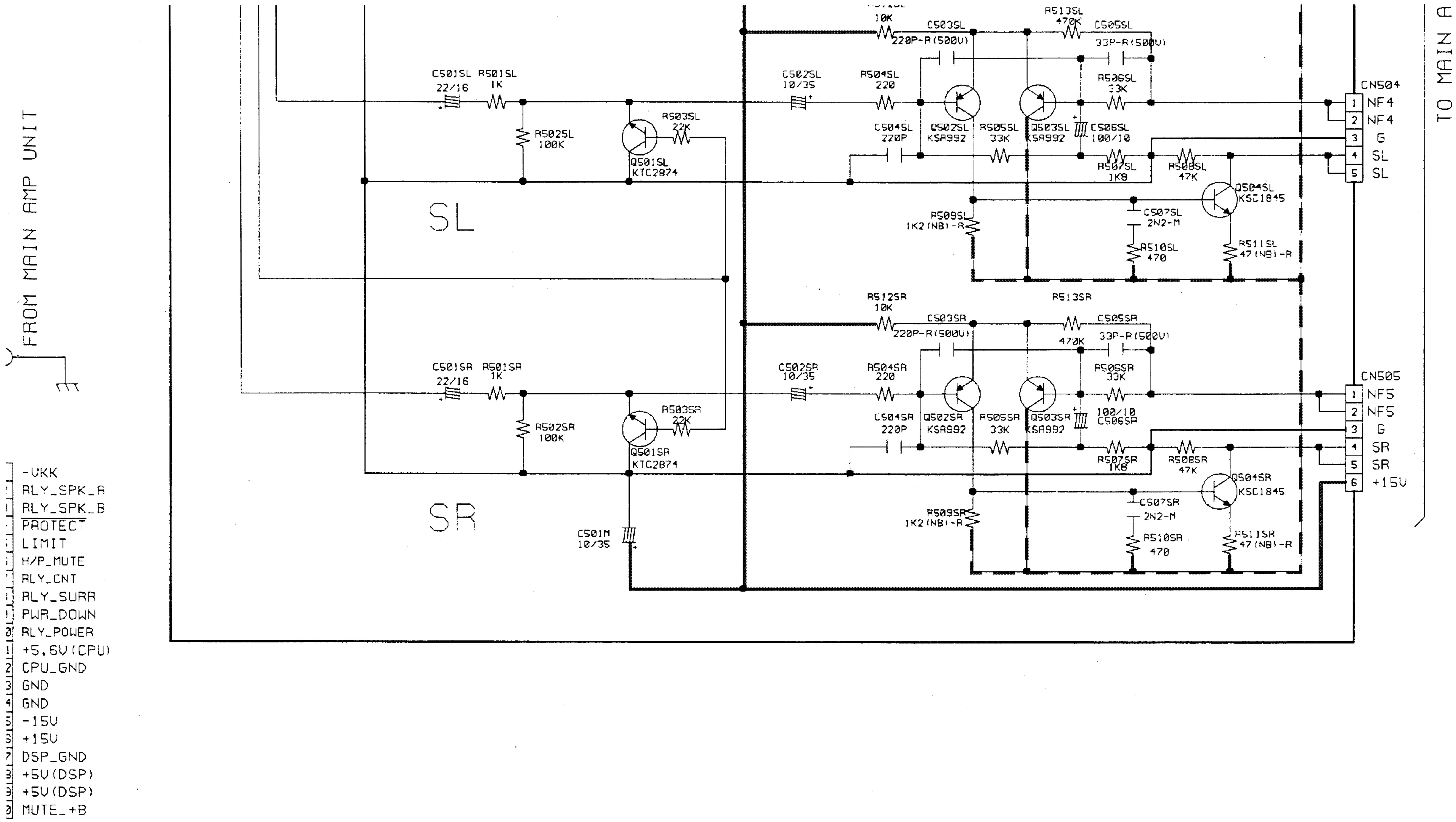
CONNECTION UNIT I
FROM CPU UNIT
CN551
T_DFT 1
9184_CE 2
9184_CLK 3
9184_DAT 4
GND 5
FL 6
GND 7
FR 8
GND 9
SL 10
GND 11
SR 12
GND 13
SW 14
GND 15
C 16
GND 17
+15V 18
-15V 19
TC9184_CE
TC9184_CLK
TC9184_DAT
T_DFT
R555FR 470
R554FR 100K
R552FR 330
R553FR 100K
C553FR 100P
R551FR 2K2
C552FR 10/35
R556FR 68K
C554FR 10/35
R567FR 470K
C555FR 47P
IC551 NJM2068
FL_TONE_OUT
R564FR 470
R560FR 510K
R561FR 33K
R562FR 3K3
C556FR 10/35
R559FR 22K
C558FR 56N-M
R558FR 4K7
C557FR 10N-M
C561FR 6N8-M
C559FR 22N-M
R563FR 390
C560FR 3N3-M
R551T 1K
R552T 1K
C551T 100/16
C553T 100N
C552T 100/16
C554T 100N
IC552 TC9184
VDD
BASS+
BASS-
COM
TREBL-
TREBL+
SIB
DATA
VSS
GND
CLK
R553T 1K
R551FL 2K2
C552FL 10/35
NJM2068
R552FL 330
R553FL 100K
C553FL 100P
C555FL 47P
R567FL 470K
C554FL 10/35
R556FL 68K
R555FL 470
R554FL 100K
C559FL 22N-M
R563FL 390
C560FL 3N3-M
R558FL 4K7
C561FL 6N8-M
C556FL 10/35
R559FL 22K
C557FL 10N-M
C558FL 56N-M
R560FL 510K
R561FL 33K
R562FL 3K3
R564FL 470
R554T 47(1/4W)-R
RL551
1SS133T
D551T
Q553T DTC114YS
CN554
FL 1
GND 2
FR 3
GND 4
SL 5
GND 6
SR 7
GND 8
C 9
GND 10
SW 11
SURR_ 12
CNT_ 13
FRNT_ 14
SW 15
CONNECTION UNIT
R551 22K
C551 2.2/50
R552 2K2
R553 560K
R555 2K2
D553 1SS131T
D555 1SS131T
D557 1SS131T
D559 1SS131T
D561 1SS131T
LIMIT
SW
R562 470K
C552 0.1/50
R560 1K
Q553 DTA114ES
SURR_MUTE
C553 0.1/50


6
7
8
9
10
11
A
B
C
D
TO PRE OUT UNIT
CP506
FL
GND
FR
GND
CENTER
SW
GND
SW MU
PRE AMP B'D
CP554
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
SURR_MUTE
CNT_MUTE
FRNT_MUTE
SW MUTE
CN554
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
SURR_MUTE
CNT_MUTE
FRNT_MUTE
SW MUTE
FL
C154FL
22/16
C501FL
22/16
R501FL
470
R502FL
100K
Q503M
KTC2874
R506M
10K
R505M
470
R503FL
22K
Q501FL
KTC2874
C502FL
10/35
R512FL
10K
C503FL
220P-R(500V)
R504FL
220
C504FL
220P
Q502FL
KSA992
R505FL
33K
R513FL
470K
C505FL
33P-R(500V)
Q503FL
KSA992
R506FL
33K
C506FL
100/10
R507FL 1K8
R508FL
47K
Q504FL
KSC1845
C507FL
2N2-M
R509FL
1K2(NB)-R
R510FL
470
R511FL
47(NB)-R
CN501
F/L
F/L
G
G
NF1
NF1
G
-B
-B
C154FR
22/16
C501FR
22/16
R501FR
470
R502FR
100K
Q501M
KTC2874
R502M
10K
R501M
470
R503FR
22K
Q501FR
KTC2874
FR
C502FR
10/35
R512FR
10K
C503FR
220P-R(500V)
R504FR
220
C504FR
220P
Q502FR
KSA992
R505FR
33K
R513FR
470K
C505FR
33P-R(500V)
Q503FR
KSA992
R506FR
33K
C506FR
100/10
R507FR
1K8
R508FR
47K
Q504FR
KSC1845
C507FR
2N2-M
R509FR
1K2(NB)-R
R510FR
470
R511FR
47(NB)-R
CN502
NF2
NF2
G
FR
FR
22/16
C501C
22/16
R501C
470
R502C
100K
Q502M
KTC2874
R504M
10K
R503M
470
R503C
22K
Q501C
KTC2874
C
C502C
10/35
R512C
10K
C503C
220P-R(500V)
R504C
220
C504C
220P
Q502C
KSA992
R505C
33K
R513C
470K
C505C
33P-R(500V)
Q503C
KSA992
R506C
33K
C506C
100/10
R507C
1K8
R508C
47K
Q504C
KSC1845
C507C
2N2-M
R509C
1K2(NB)-R
R510C
470
R511C
47(NB)-R
CN503
NF3
NF3
G
C
C
R512SL
10K
C503SL
220P-R(500V)
R513SL
470K
C505SL
33P-R(500V)
AIN AMP UNIT


LIMIT
R553
560K
R554
3K6
Q551
KTC3200BL
C555
10N
GND
C556
10N
Q552
KTA1268
R555
2K2
R557
2K2
R556
2K2
D551
1SS131T
D552
1SS131T
D553
1SS131T
D554
1SS131T
D555
1SS131T
D556
1SS131T
D557
1SS131T
D558
1SS131T
D559
1SS131T
D560
1SS131T
D561
1SS131T
+15V
-15V
GND
-15V
C553
0.1/50
R568
470K
R573
1K
Q554
DTA114ES
CENTER_MUTE
R571
10K
C554
0.1/50
R572
470K
R574
1K
Q555
DTA114ES
R567
10K
FRONT_MUTE
C551S
47N
R559
R565
R570
1K2(1W)-R
1K2(1W)-R
1K2(1W)-R
D565
1SS133T
D564
UZ5V6
C557
10/35
D562
1N4007
D563
1N4007
C551M
100/25
+15V
-15V
FROM MAIN AMP UNIT
CN553
1 -VKK
2 RLY_S
3 RLY_S
4 PROTE
5 LIMIT
6 H/P_MU
7 RLY_CN
8 RLY_S
9 PWR_D
10 RLY_PO
11 +5.6V
12 CPU_G
13 GND
14 GND
15 -15V
16 +15V
17 DSP_G
18 +5V(D
19 +5V(D
20 MUTE_
FROM CPU UNIT
CN552
-VKK 18
PROTECT 17
PWR_DOWN 16
DSP_GND 15
+5V(DSP) 14
CPU_GND 13
+5.6V(CPU) 12
SUR_MUTE 11
FRNT_MUTE 10
CNT_MUTE 9
RLY_POWER 8
H/P_MUTE 7
RLY_CNT 6
RLY_SURR 5
RLY_SPK_A 4
RLY_SPK_B 3
MUTE_+B 2
SW_MUTE 1

## NOTICE

ALL RESISTANCE VAL
ALL CAPACITANCE VA
EACH VOLTAGE AND
CONDITION.
CIRCUIT AND PARTS
NOTICE.



FROM MAIN AMP UNIT
TO MAIN A
R512SL 10K
C503SL 220P-R(500V)
R513SL 470K
C505SL 33P-R(500V)
C501SL 22/16
R501SL 1K
C502SL 10/35
R504SL 220
R506SL 33K
CN504
NF4
NF4
G
SL
SL
R502SL 100K
R503SL 22K
Q501SL KTC2874
C504SL 220P
Q502SL KSA992
R505SL 33K
Q503SL KSA992
C506SL 100/10
R507SL 1K8
R508SL 47K
Q504SL KSC1845
SL
R509SL 1K2(NB)-R
C507SL 2N2-M
R510SL 470
R511SL 47(NB)-R
R512SR 10K
C503SR 220P-R(500V)
R513SR 470K
C505SR 33P-R(500V)
C501SR 22/16
R501SR 1K
C502SR 10/35
R504SR 220
R506SR 33K
CN505
NF5
NF5
G
SR
SR
+15V
R502SR 100K
R503SR 22K
Q501SR KTC2874
C504SR 220P
Q502SR KSA992
R505SR 33K
Q503SR KSA992
C506SR 100/10
R507SR 1K8
R508SR 47K
Q504SR KSC1845
SR
R509SR 1K2(NB)-R
C507SR 2N2-M
R510SR 470
R511SR 47(NB)-R
C501M 10/35
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P_MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B

——— + B LINE

— — — — – B LINE

░░░░ SIGNAL LINE

## WARNING:

Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

## CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

## WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

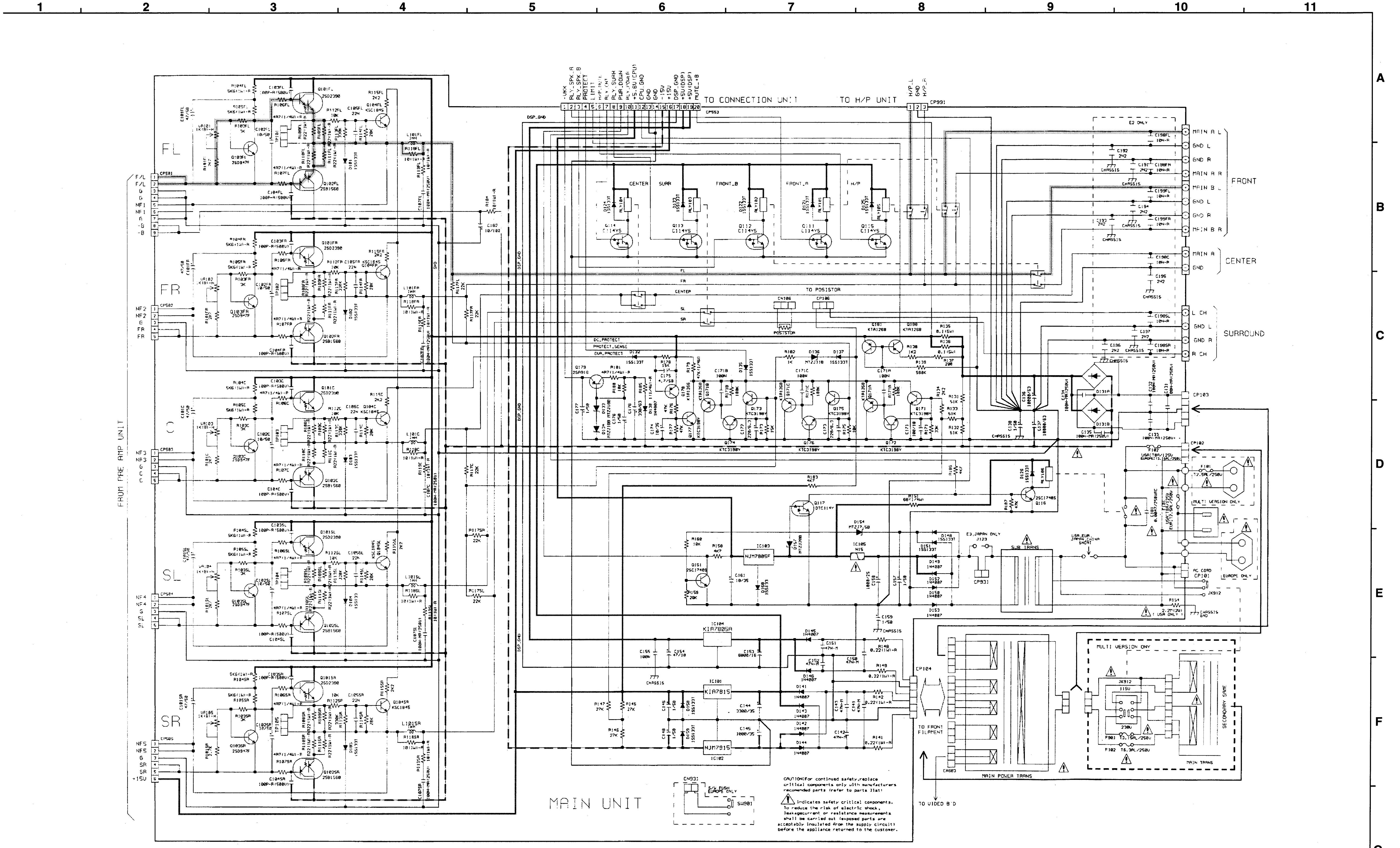
CE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
NCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

ᑭARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

# SCHEMATIC DIAGRAMS (4/8)

CNT UNIT
PRE-AMP UNIT

## SCHEMATIC DIAGRAMS (5/8)


1
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5
6
7
8
9
10
11
A
B
C
D
E
F
G
TO CONNECTION UNIT
TO H/P UNIT
FL
FR
C
SL
SR
FROM PRE AMP UNIT
CENTER
SURR
FRONT_B
FRONT_A
H/P
TO POSISTOR
MAIN A L
GND L
GND R
MAIN A R
MAIN B L
GND L
GND R
MAIN B R
FRONT
MAIN A
GND
CENTER
L CH
GND L
GND R
R CH
SURROUND
E2 ONLY
CHASSIS
DC_PROTECT
PROTECT_SENSE
CUR_PROTECT
IC104 KIA7805A
IC101 KIA7815
IC102 NJM7915
IC103 NJM7805F
SUB TRANS
MAIN POWER TRANS
MULTI VERSION ONLY
SECONDARY SAVE
EUROPE ONLY
USA,EUR JAPAN,CHINA SHORT
E3,JAPAN ONLY
AC CORD CP101
TO FRONT FILAMENT
TO VIDEO B'D
MAIN UNIT
CP104
CP103
CP102
JK912
CN931
SW901
115V
230V

CAUTION:For continued safety,replace critical components only with manufacturers recomended parts (refer to parts list)

⚠ indicates safety critical components.
To reduce the risk of electric shock, leakagecurrent or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance returned to the customer.

———— + B LINE
– – – – – B LINE
▨ SIGNAL LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

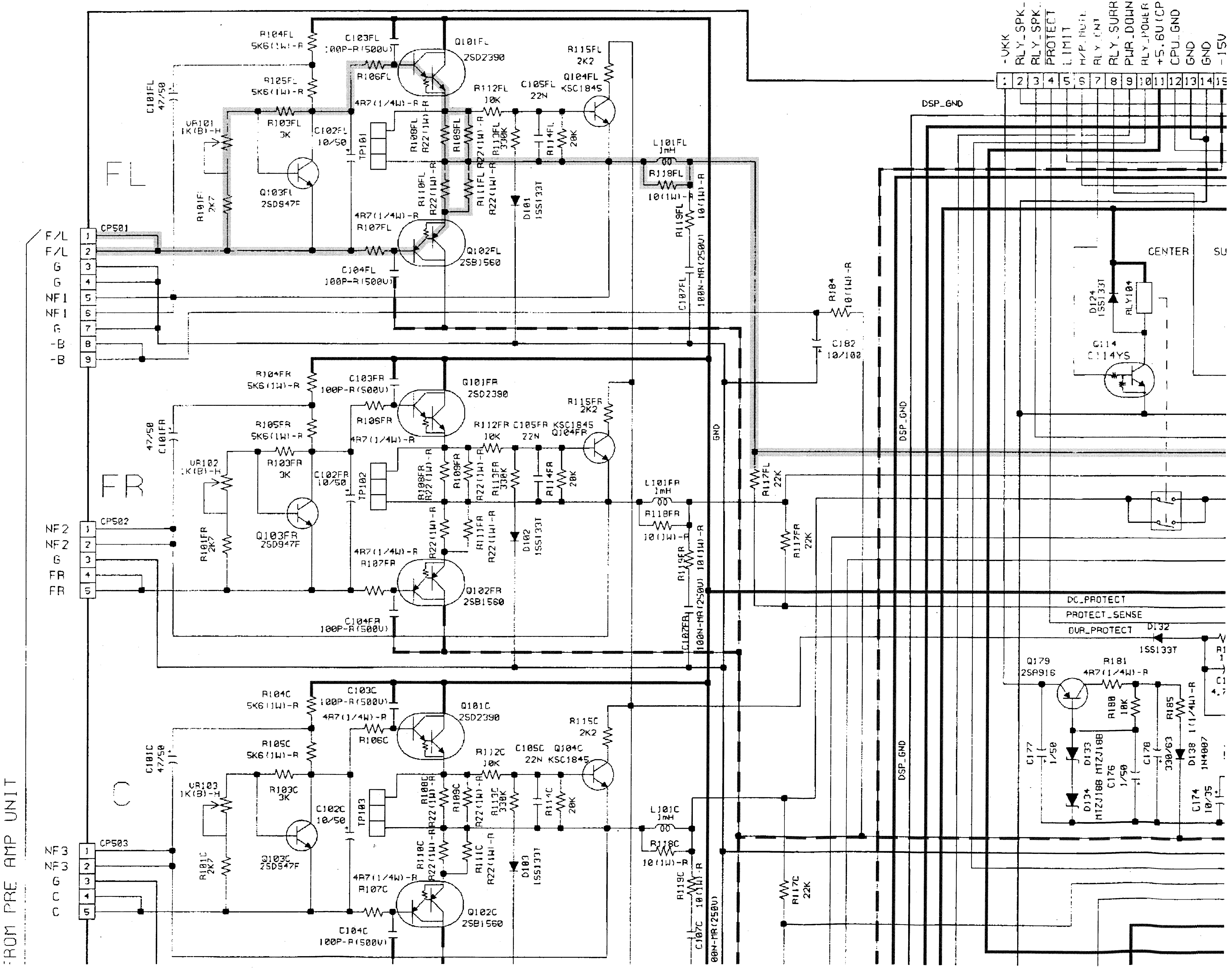
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

H

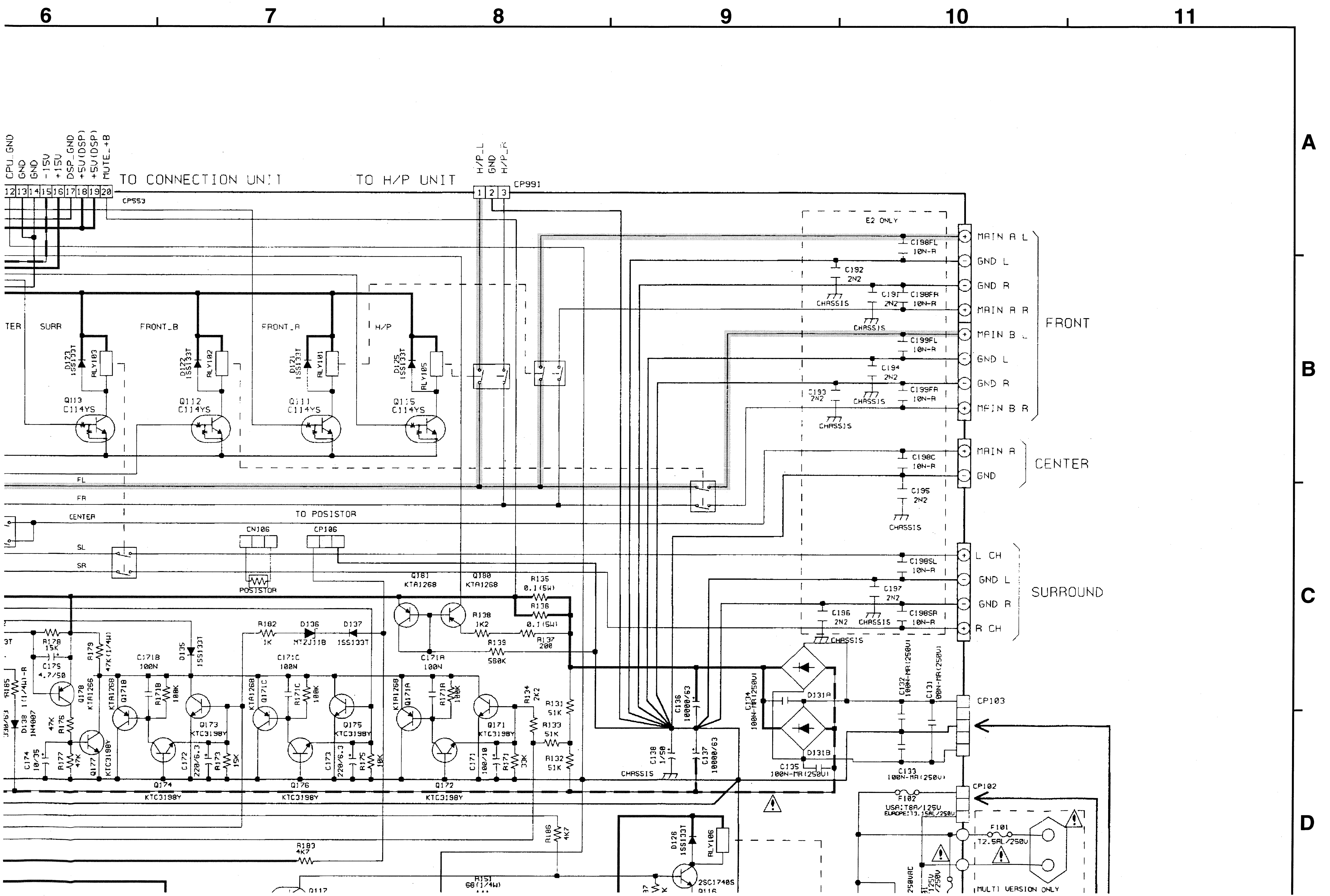
## SCHEMATIC DIAGRAMS (5/8)
MAIN UNIT
VOLTAGE UNIT
OUTLET UNIT

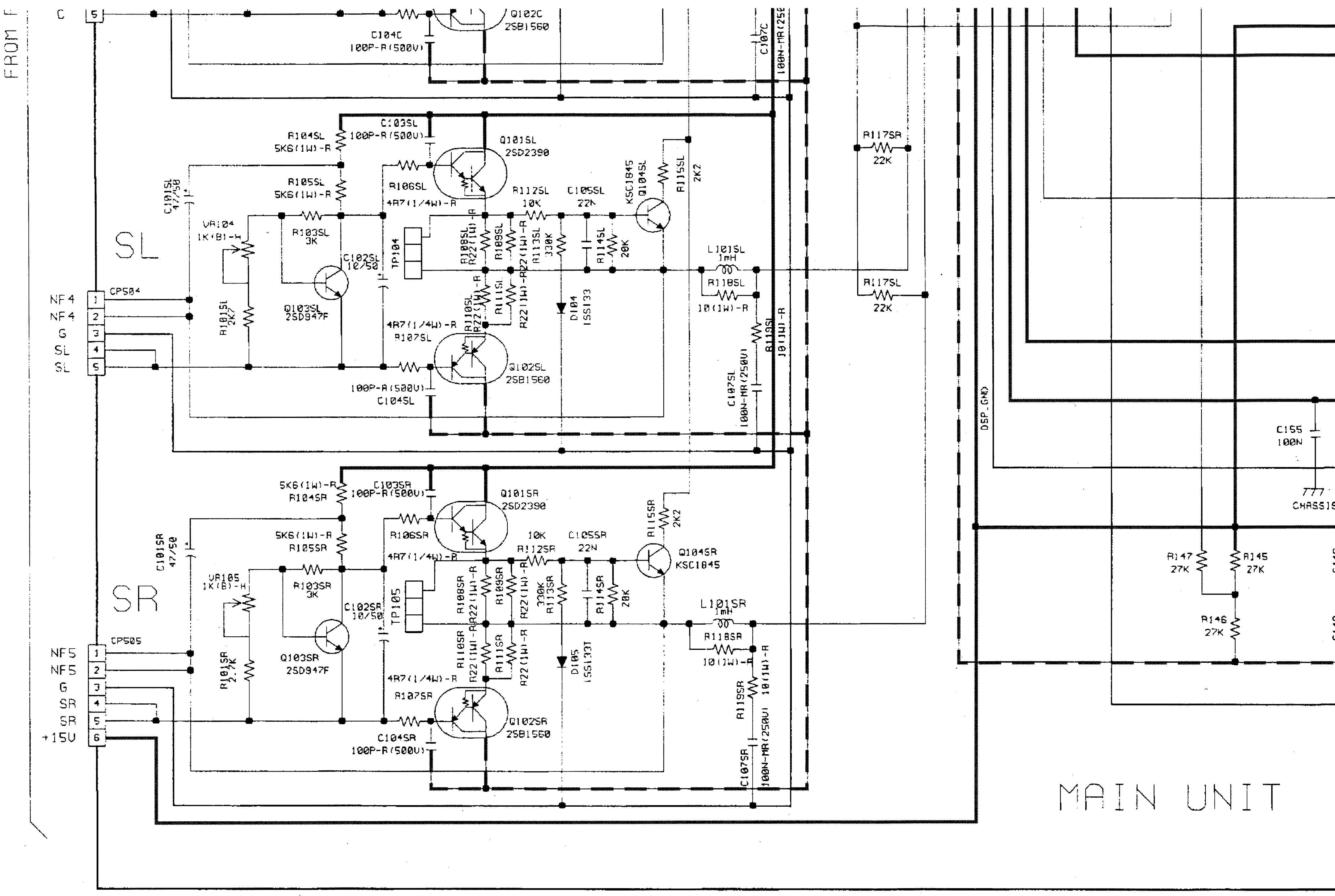
# SCHEMATIC DIAGRAMS (5/8)

1 2 3 4 5 6



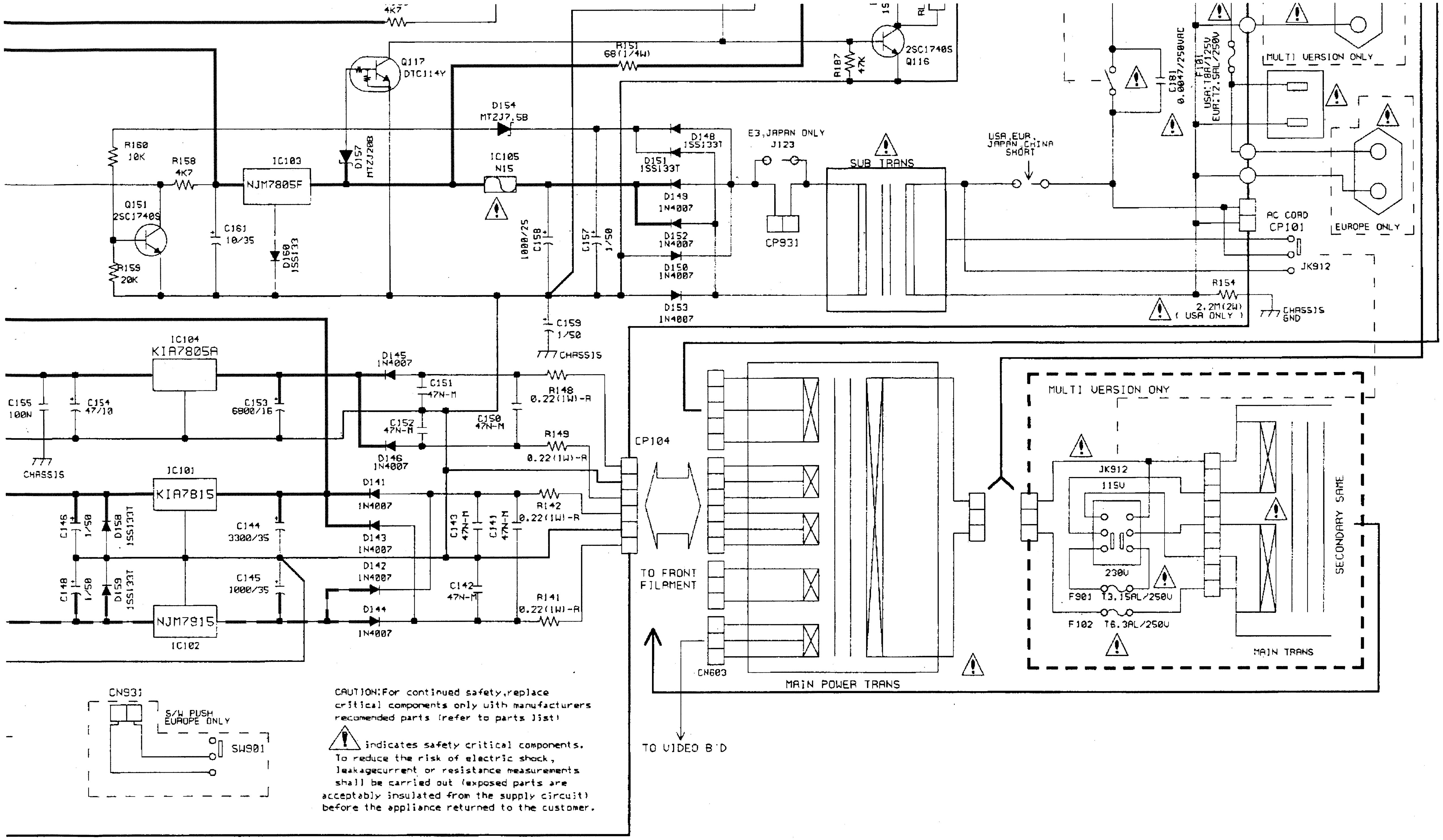
FROM PRE AMP UNIT
CP501
F/L
F/L
G
G
NF1
NF1
G
-B
-B
CP502
NF2
NF2
G
FR
FR
CP503
NF3
NF3
G
C
C
FL
FR
C
R104FL 5K6(1W)-R
C103FL 100P-R(500V)
Q101FL 2SD2390
R115FL 2K2
Q104FL KSC1845
R105FL 5K6(1W)-R
R106FL
R112FL 10K
C105FL 22N
4R7(1/4W)-R
C101FL 47/50
VR101 1K(B)-H
R103FL 3K
C102FL 10/50
TP101
R108FL R22(1W)-R
R109FL R22(1W)-R
R113FL 330K
R114FL 20K
L101FL 1mH
R118FL 10(1W)-R
R101FL 2K7
Q103FL 2SD947F
R110FL R22(1W)-R
R111FL R22(1W)-R
D101 1SS133T
4R7(1/4W)-R
R107FL
Q102FL 2SB1560
C104FL 100P-R(500V)
R119FL 10(1W)-R
C107FL 100N-MR(250V)
R184 10(1W)-R
C182 10/100
R104FR 5K6(1W)-R
C103FR 100P-R(500V)
Q101FR 2SD2390
R115FR 2K2
R105FR 5K6(1W)-R
R106FR
R112FR 10K
C105FR 22N
Q104FR KSC1845
4R7(1/4W)-R
C101FR 47/50
VR102 1K(B)-H
R103FR 3K
C102FR 10/50
TP102
R108FR R22(1W)-R
R109FR R22(1W)-R
R113FR 330K
R114FR 20K
L101FR 1mH
R118FR 10(1W)-R
R117FL 22K
R117FR 22K
R101FR 2K7
Q103FR 2SD947F
R110FR R22(1W)-R
R111FR R22(1W)-R
D102 1SS133T
4R7(1/4W)-R
R107FR
Q102FR 2SB1560
C104FR 100P-R(500V)
R119FR 10(1W)-R
C107FR 100N-MR(250V)
GND
DSP_GND
R104C 5K6(1W)-R
C103C 100P-R(500V)
Q101C 2SD2390
4R7(1/4W)-R
R106C
R115C 2K2
R105C 5K6(1W)-R
R112C 10K
C105C 22N
Q104C KSC1845
C101C 47/50
VR103 1K(B)-H
R103C 3K
C102C 10/50
TP103
R108C R22(1W)-R
R109C R22(1W)-R
R113C 330K
R114C 20K
L101C 1mH
R118C 10(1W)-R
R101C 2K7
Q103C 2SD947F
R110C R22(1W)-R
R111C R22(1W)-R
D103 1SS133T
4R7(1/4W)-R
R107C
Q102C 2SB1560
C104C 100P-R(500V)
R119C 10(1W)-R
C107C 100N-MR(250V)
R117C 22K
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P_MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
-15V
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
DSP_GND
CENTER
SU
D124 1SS133T
RLY104
Q114 C114YS
DC_PROTECT
PROTECT_SENSE
OVR_PROTECT
D132 1SS133T
Q179 2SA916
R181 4R7(1/4W)-R
R180 10K
R185 1(1/4W)-R
C177 1/50
D133 MTZJ18B
D134 MTZJ18B
C176 1/50
C178 330/63
D138 1N4007
C174 10/35


6
7
8
9
10
11
A
B
C
D
CPU_GND
GND
GND
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B
12 13 14 15 16 17 18 19 20
CP553
TO CONNECTION UNIT
TO H/P UNIT
H/P_L
GND
H/P_R
1 2 3
CP991
E2 ONLY
MAIN A L
GND L
GND R
MAIN A R
MAIN B L
GND L
GND R
MAIN B R
FRONT
MAIN A
GND
CENTER
L CH
GND L
GND R
R CH
SURROUND
C198FL 10N-R
C192 2N2
CHASSIS
C197 2N2
C198FR 10N-R
C199FL 10N-R
C194 2N2
C193 2N2
C199FR 10N-R
C198C 10N-R
C195 2N2
C198SL 10N-R
C197 2N2
C196 2N2
C198SR 10N-R
TER
SURR
FRONT_B
FRONT_A
H/P
D123 1SS133T
RLY103
Q113 C114YS
D122 1SS133T
RLY102
Q112 C114YS
D121 1SS133T
RLY101
Q111 C114YS
D125 1SS133T
RLY105
Q115 C114YS
FL
FR
CENTER
SL
SR
TO POSISTOR
CN106
CP106
POSISTOR
Q181 KTA1268
Q180 KTA1268
R135 0.1(5W)
R136 0.1(5W)
R138 1K2
R139 560K
R137 200
R182 1K
D136 MTZJ11B
D137 1SS133T
C171A 100N
R178 15K
C175 4.7/50
R179 47K(1/4W)
C171B 100N
D135 1SS133T
C171C 100N
R185 1(1/4W)-R
D138 1N4007
Q178 KTA1266
R176 47K
R177 47K
C174 10/35
Q177 KTC3198Y
KTA1268 Q171B
R171B 100K
Q173 KTC3198Y
Q174 KTC3198Y
C172 220/6.3
R173 15K
KTA1268 Q171C
R171C 100K
Q175 KTC3198Y
Q176 KTC3198Y
C173 220/6.3
R175 10K
KTA1268 Q171A
R171A 100K
Q171 KTC3198Y
Q172 KTC3198Y
C171 100/10
R171 33K
R134 2K2
R131 51K
R133 51K
R132 51K
C136 10000/63
C137 10000/63
C138 1/50
CHASSIS
C134 100N-MR(250V)
D131A
D131B
C135 100N-MR(250V)
C132 100N-MR(250V)
C131 100N-MR(250V)
C133 100N-MR(250V)
CP103
CP102
F102
USA:T8A/125V
EUROPE:T3.15AL/250V
F101
T2.5AL/250V
MULTI VERSION ONLY
250VAC
125V 250V
R186 4K7
R183 4K7
R151 68(1/4W)
D126 1SS133T
RLY106
2SC1740S Q116
Q117


FROM F
C
Q102C
2SB1560
C104C
100P-R(500V)
C107C
100N-MR(250
C103SL
100P-R(500V)
R104SL
5K6(1W)-R
Q101SL
2SD2390
R105SL
5K6(1W)-R
R106SL
4R7(1/4W)-R
C101SL
47/50
VR104
1K(B)-H
R103SL
3K
SL
C102SL
10/50
Q103SL
2SD947F
R101SL
2K7
TP104
R108SL
R22(1W)-R
R109SL
R22(1W)-R
R110SL
R22(1W)-R
R111SL
R22(1W)-R
R112SL
10K
C105SL
22N
R113SL
330K
R114SL
20K
D104
1SS133
Q104SL
KSC1845
R115SL
2K2
L101SL
1mH
R118SL
10(1W)-R
R119SL
10(1W)-R
C107SL
100N-MR(250V)
4R7(1/4W)-R
R107SL
Q102SL
2SB1560
100P-R(500V)
C104SL
CPS04
NF4
NF4
G
SL
SL
R117SR
22K
R117SL
22K
DSP_GND
C155
100N
CHASSIS
5K6(1W)-R
R104SR
C103SR
100P-R(500V)
Q101SR
2SD2390
5K6(1W)-R
R105SR
R106SR
4R7(1/4W)-R
C101SR
47/50
VR105
1K(B)-H
R103SR
3K
SR
C102SR
10/50
Q103SR
2SD947F
R101SR
2.7K
TP105
R108SR
R22(1W)-R
R109SR
R22(1W)-R
R110SR
R22(1W)-R
R111SR
R22(1W)-R
R112SR
10K
C105SR
22N
R113SR
330K
R114SR
20K
D105
1SS133
R115SR
2K2
Q104SR
KSC1845
L101SR
1mH
R118SR
10(1W)-R
R119SR
10(1W)-R
C107SR
100N-MR(250V)
4R7(1/4W)-R
R107SR
Q102SR
2SB1560
C104SR
100P-R(500V)
CPS05
NF5
NF5
G
SR
SR
+15V
R147
27K
R145
27K
R146
27K
MAIN UNIT

## NOTICE

ALL RESISTANCE VALU
ALL CAPACITANCE VAL
EACH VOLTAGE AND C
CONDITION.
CIRCUIT AND PARTS A
NOTICE.


Q117
DTC114Y
R151
68(1/4W)
R187
47K
2SC1740S
Q116
D154
MTZJ7.5B
R160
10K
R158
4K7
IC103
NJM7805F
D157
MTZJ20B
IC105
N15
D148
1SS133T
D151
1SS133T
D149
1N4007
D152
1N4007
D150
1N4007
D153
1N4007
Q151
2SC1740S
R159
20K
C161
10/35
D160
1SS133
C158
1000/25
C157
1/50
C159
1/50
CHASSIS
E3,JAPAN ONLY
J123
CP931
SUB TRANS
USA,EUR,
JAPAN,CHINA
SHORT
C181
0.0047/250VAC
F181
USA:T8A/125V
EUR:T2.5AL/250V
MULTI VERSION ONLY
EUROPE ONLY
AC CORD
CP101
JK912
R154
2.2M(2W)
( USA ONLY )
CHASSIS
GND
IC104
KIA7805A
C155
100N
C154
47/10
C153
6800/16
CHASSIS
D145
1N4007
C151
47N-M
R148
0.22(1W)-A
C152
47N-M
C150
47N-M
R149
0.22(1W)-A
D146
1N4007
IC101
KIA7815
D141
1N4007
R142
0.22(1W)-A
C146
1/50
D158
1SS133T
C144
3300/35
D143
1N4007
C143
47N-M
C141
47N-M
D142
1N4007
C148
1/50
D159
1SS133T
C145
1000/35
C142
47N-M
R141
0.22(1W)-A
D144
1N4007
NJM7915
IC102
CP104
TO FRONT
FILAMENT
CN603
MAIN POWER TRANS
TO VIDEO B'D
MULTI VERSION ONY
JK912
115V
230V
F901 T3.15AL/250V
F102 T6.3AL/250V
SECONDARY SAME
MAIN TRANS
CN931
S/W PUSH
EUROPE ONLY
SW901

CAUTION:For continued safety,replace critical components only with manufacturers recomended parts (refer to parts list)

⚠ indicates safety critical components. To reduce the risk of electric shock, leakagecurrent or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance returned to the customer.

E

F

G

H

CE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
CE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

ARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

## WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

## CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

## WARNING:

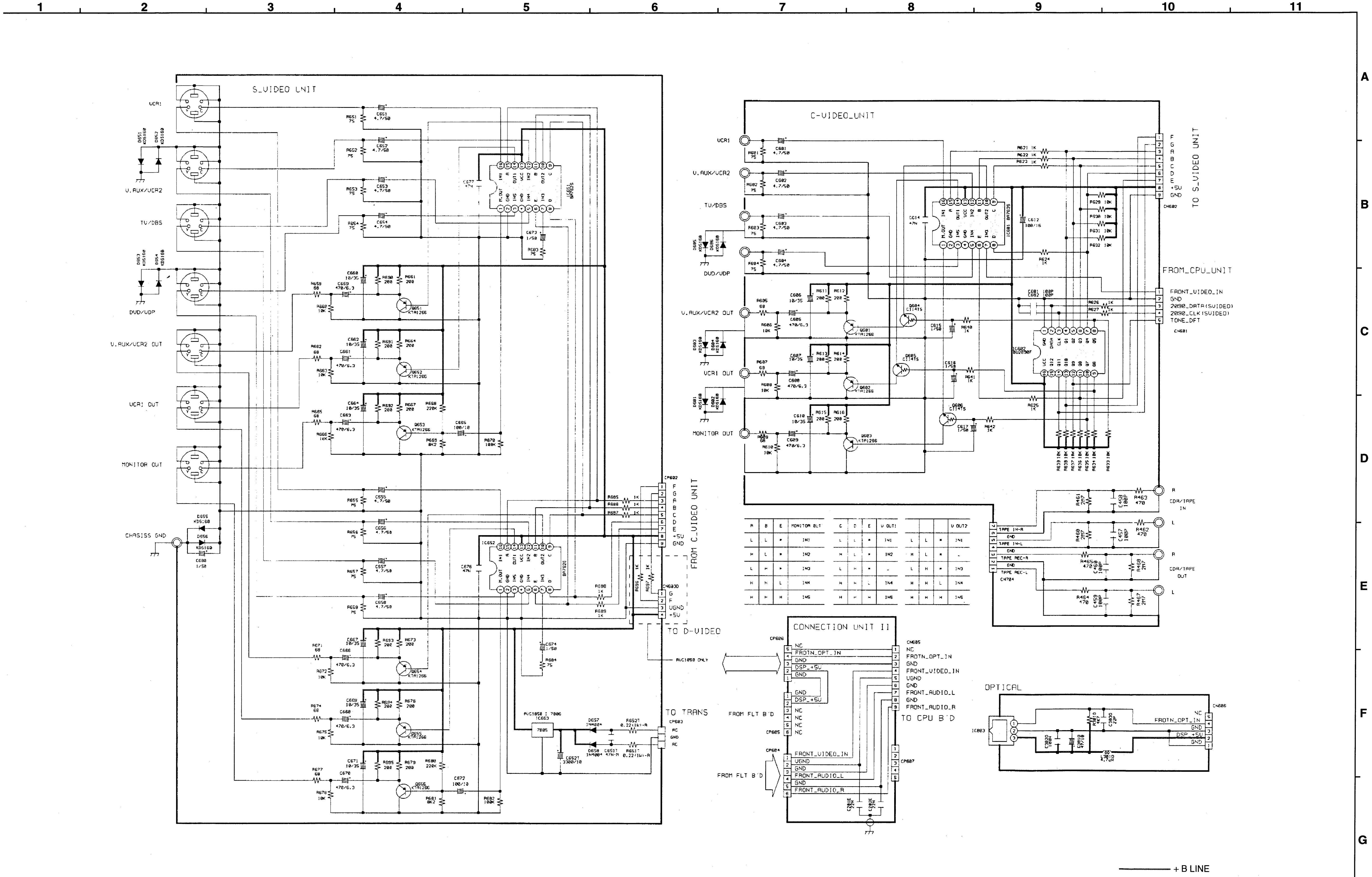
DO NOT return the unit to the customer until the problem is located and corrected.

——— +B LINE
– – – – –B LINE
▨ SIGNAL LINE

# SCHEMATIC DIAGRAMS (5/8)

MAIN UNIT
VOLTAGE UNIT
OUTLET UNIT

## SCHEMATIC DIAGRAMS (6/8)


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
S_VIDEO UNIT
VCR1
V.AUX/VCR2
TV/DBS
DVD/VDP
V.AUX/VCR2 OUT
VCR1 OUT
MONITOR OUT
CHASSIS GND
BA7626S
CP602
F G A B C D E +5V GND
FROM C_VIDEO UNIT
CN603D
G F VGND +5V
TO D-VIDEO
TO TRANS
7805
C-VIDEO_UNIT
TO S_VIDEO UNIT
FROM_CPU_UNIT
FRONT_VIDEO_IN
GND
2090_DATA(SVIDEO)
2090_CLK(SVIDEO)
TONE_DFT
BU2090F
CDR/TAPE IN
CDR/TAPE OUT
TAPE IN-R
TAPE IN-L
TAPE REC-R
TAPE REC-L
CN704
CONNECTION UNIT II
FROM FLT B'D
TO CPU B'D
NC
FROTN_OPT_IN
DSP_+5V
FRONT_VIDEO_IN
VGND
FRONT_AUDIO_L
FRONT_AUDIO_R
OPTICAL
IC803
+ B LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

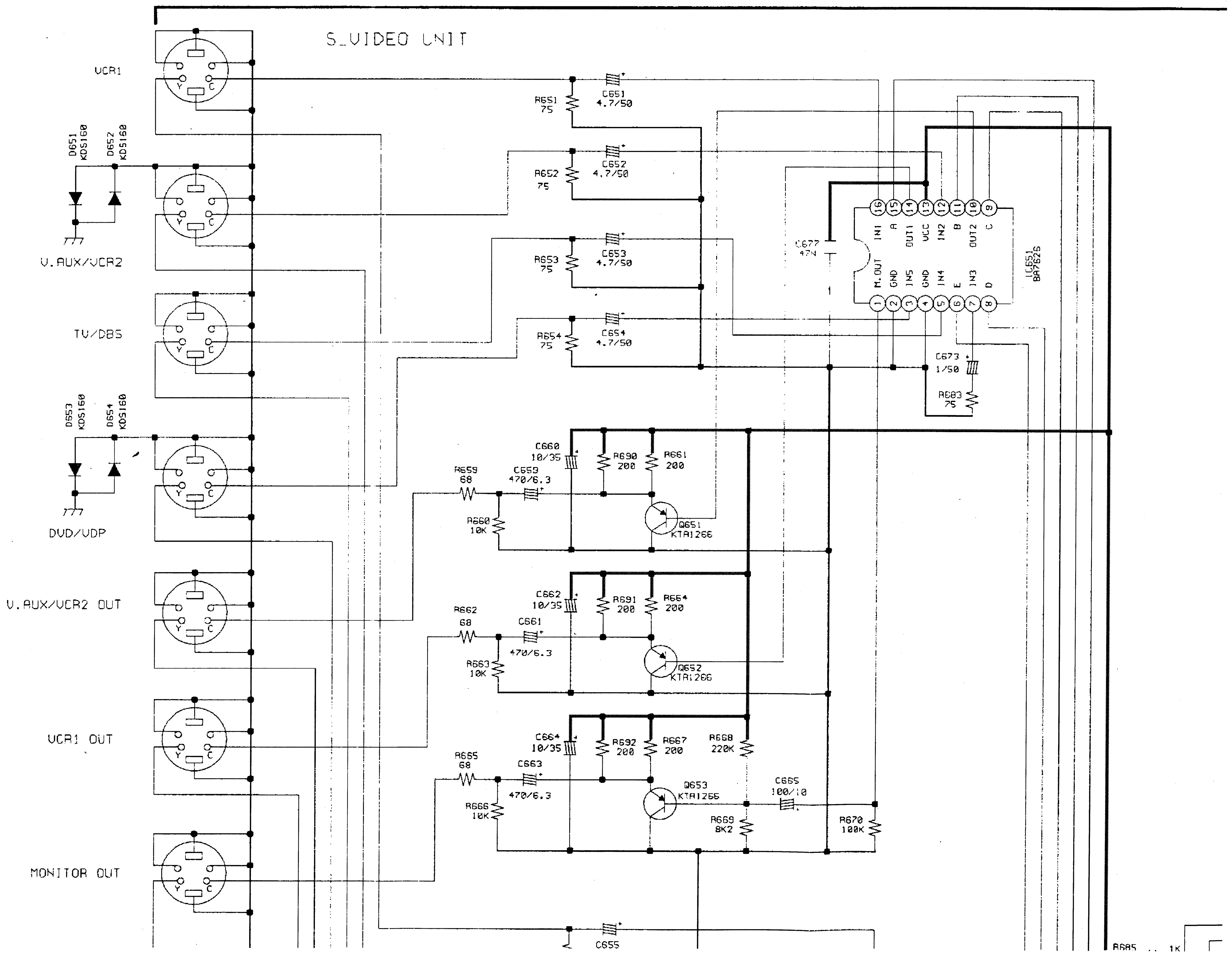
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

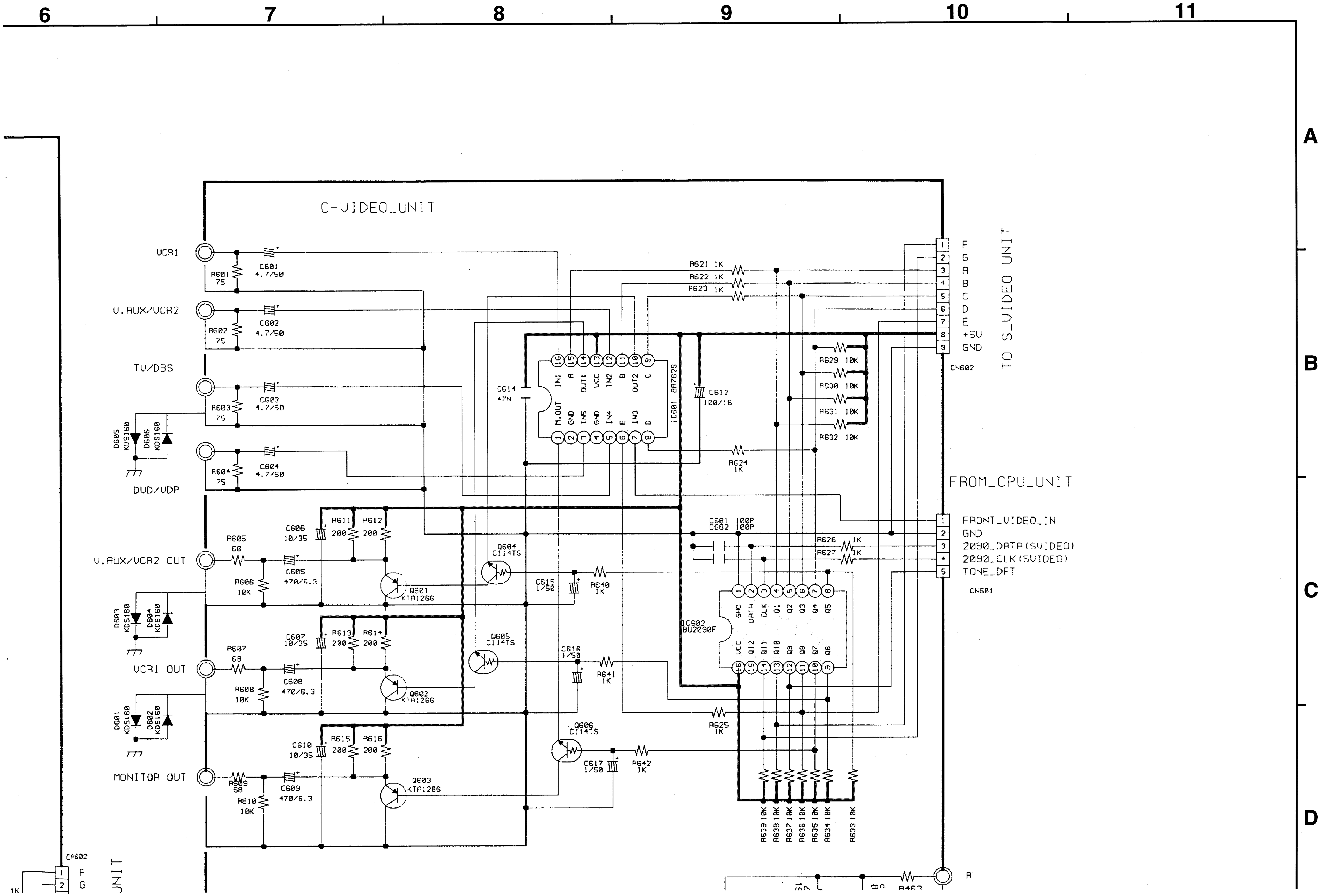
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

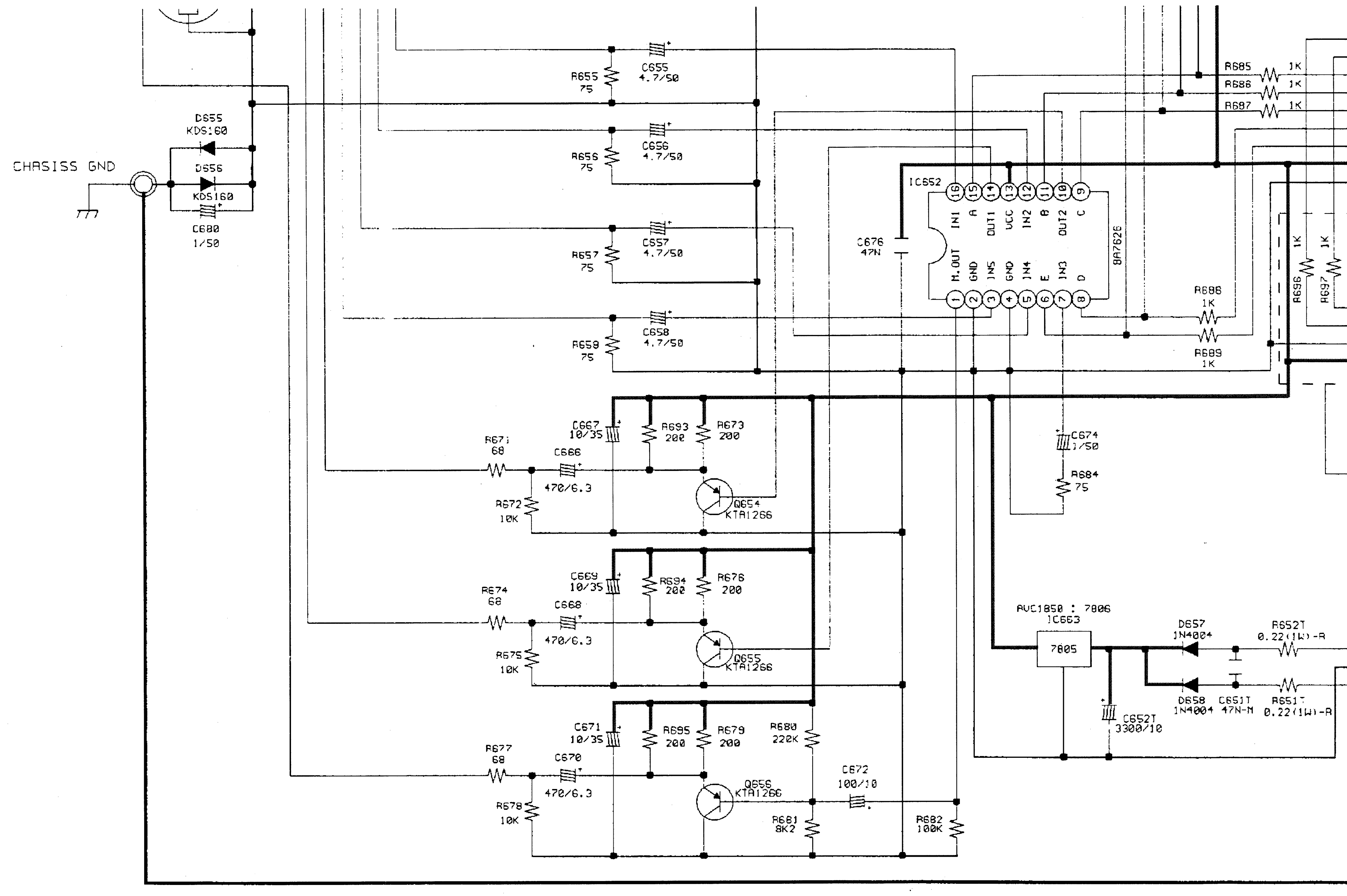
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS (6/8)
VIDEO UNIT
S-VIDEO UNIT
FRONT CNT UNIT
OPTICAL UNIT

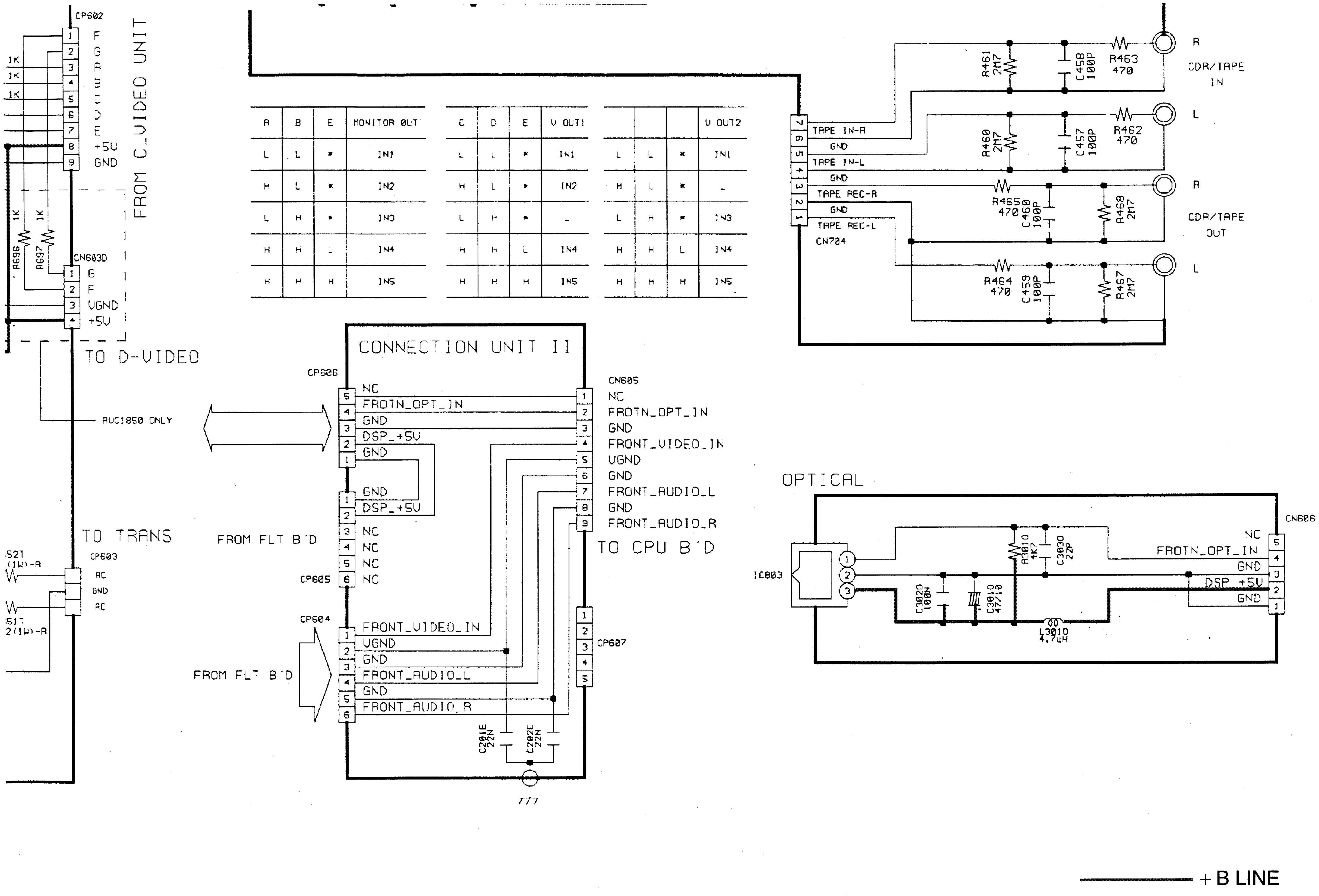
# SCHEMATIC DIAGRAMS (6/8)


S_VIDEO UNIT
VCR1
V.AUX/VCR2
TV/DBS
DVD/VDP
V.AUX/VCR2 OUT
VCR1 OUT
MONITOR OUT
Y
C
D651 KDS160
D652 KDS160
D653 KDS160
D654 KDS160
R651 75
C651 4.7/50
R652 75
C652 4.7/50
R653 75
C653 4.7/50
R654 75
C654 4.7/50
C677 47N
IC651 BA7625
1 M.OUT
2 GND
3 IN5
4 GND
5 IN4
6 E
7 IN3
8 D
9 C
10 OUT2
11 B
12 IN2
13 VCC
14 OUT1
15 A
16 IN1
C673 1/50
R683 75
C660 10/35
R690 200
R661 200
R659 68
C659 470/6.3
R660 10K
Q651 KTA1266
C662 10/35
R691 200
R664 200
R662 68
C661 470/6.3
R663 10K
Q652 KTA1266
C664 10/35
R692 200
R667 200
R668 220K
R665 68
C663 470/6.3
R666 10K
Q653 KTA1266
C665 100/10
R669 8K2
R670 100K
C655
R685 1K


6
7
8
9
10
11
A
B
C
D
C-VIDEO_UNIT
VCR1
R601 75
C601 4.7/50
V.AUX/VCR2
R602 75
C602 4.7/50
TV/DBS
R603 75
C603 4.7/50
D605 KDS160
D606 KDS160
R604 75
C604 4.7/50
DVD/VDP
V.AUX/VCR2 OUT
R605 68
R606 10K
C605 470/6.3
C606 10/35
R611 200
R612 200
Q601 KTA1266
D603 KDS160
D604 KDS160
VCR1 OUT
R607 68
R608 10K
C607 10/35
C608 470/6.3
R613 200
R614 200
Q602 KTA1266
D601 KDS160
D602 KDS160
MONITOR OUT
R609 68
R610 10K
C609 470/6.3
C610 10/35
R615 200
R616 200
Q603 KTA1266
Q604 C114TS
Q605 C114TS
Q606 C114TS
C615 1/50
C616 1/50
C617 1/50
R640 1K
R641 1K
R642 1K
C614 47N
IC601 BA7626S
IN1 A OUT1 VCC IN2 B OUT2 C
M.OUT GND IN5 GND IN4 E IN3 D
C612 100/16
R621 1K
R622 1K
R623 1K
R624 1K
R625 1K
R629 10K
R630 10K
R631 10K
R632 10K
1 F
2 G
3 A
4 B
5 C
6 D
7 E
8 +5V
9 GND
CN602
TO S_VIDEO UNIT
FROM_CPU_UNIT
C681 100P
C682 100P
R626 1K
R627 1K
1 FRONT_VIDEO_IN
2 GND
3 2090_DATA(SVIDEO)
4 2090_CLK(SVIDEO)
5 TONE_DFT
CN601
IC602 BU2090F
GND DATA CLK Q1 Q2 Q3 Q4 Q5
VCC Q12 Q11 Q10 Q9 Q8 Q7 Q6
R639 10K
R638 10K
R637 10K
R636 10K
R635 10K
R634 10K
R633 10K
CP602
1 F
2 G
UNIT
1K
R
R463


CHASISS GND
D655
KDS160
D656
KDS160
C680
1/50
R655
75
C655
4.7/50
R658
75
C656
4.7/50
R657
75
C657
4.7/50
R659
75
C658
4.7/50
IC652
BA7626
IN1
A
OUT1
VCC
IN2
B
OUT2
C
M.OUT
GND
IN5
GND
IN4
E
IN3
D
C676
47N
R685
R686
R687
1K
R688
1K
R689
1K
R696
R697
C674
1/50
R684
75
R671
68
C666
470/6.3
R672
10K
C667
10/35
R693
200
R673
200
Q654
KTA1266
R674
68
C668
470/6.3
R675
10K
C669
10/35
R694
200
R676
200
Q655
KTA1266
R677
68
C670
470/6.3
R678
10K
C671
10/35
R695
200
R679
200
Q656
KTA1266
R680
220K
R681
8K2
C672
100/10
R682
100K
AVC1850 : 7806
IC663
7805
C652T
3300/10
D657
1N4004
D658
1N4004
C651T
47N-M
R652T
0.22(1W)-R
R651T
0.22(1W)-R

NOTICE
ALL RESISTANCE VAL
ALL CAPACITANCE VA
EACH VOLTAGE AND C
CONDITION.
CIRCUIT AND PARTS A
NOTICE.


CP602
1 F
2 G
3 A
4 B
5 C
6 D
7 E
8 +5V
9 GND
1K
1K
1K
FROM C_VIDEO UNIT
R696 1K
R697 1K
CN603D
1 G
2 F
3 VGND
4 +5V
TO D-VIDEO
AVC1850 ONLY
TO TRANS
CP603
AC
GND
AC
S2T
(1W)-R
S1T
2(1W)-R
CONNECTION UNIT II
CP606
5 NC
4 FROTN_OPT_IN
3 GND
2 DSP_+5V
1 GND
1 GND
2 DSP_+5V
3 NC
4 NC
5 NC
6 NC
CP605
FROM FLT B'D
CP604
1 FRONT_VIDEO_IN
2 VGND
3 GND
4 FRONT_AUDIO_L
5 GND
6 FRONT_AUDIO_R
FROM FLT B'D
C201E 22N
C202E 22N
CN605
1 NC
2 FROTN_OPT_IN
3 GND
4 FRONT_VIDEO_IN
5 VGND
6 GND
7 FRONT_AUDIO_L
8 GND
9 FRONT_AUDIO_R
TO CPU B'D
CP607
1
2
3
4
5
CN704
7 TAPE IN-R
6 GND
5 TAPE IN-L
4 GND
3 TAPE REC-R
2 GND
1 TAPE REC-L
R461 2M7
C458 100P
R463 470
R460 2M7
C457 100P
R462 470
R4650 470
C460 100P
R468 2M7
R464 470
C459 100P
R467 2M7
R
CDR/TAPE IN
L
R
CDR/TAPE OUT
L
OPTICAL
IC803
1
2
3
C3020 100N
C3010 47/10
R3010 4K7
C3030 22P
L3010 4.7uH
CN606
NC 5
FROTN_OPT_IN 4
GND 3
DSP_+5V 2
GND 1
+B LINE

| A | B | E | MONITOR OUT |
|---|---|---|---|
| L | L | * | IN1 |
| H | L | * | IN2 |
| L | H | * | IN3 |
| H | H | L | IN4 |
| H | H | H | IN5 |

| C | D | E | V OUT1 |
|---|---|---|---|
| L | L | * | IN1 |
| H | L | * | IN2 |
| L | H | * | _ |
| H | H | L | IN4 |
| H | H | H | IN5 |

|  |  |  | V OUT2 |
|---|---|---|---|
| L | L | * | IN1 |
| H | L | * | _ |
| L | H | * | IN3 |
| H | H | L | IN4 |
| H | H | H | IN5 |

CE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
NCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

ARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

## WARNING:

Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

## CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

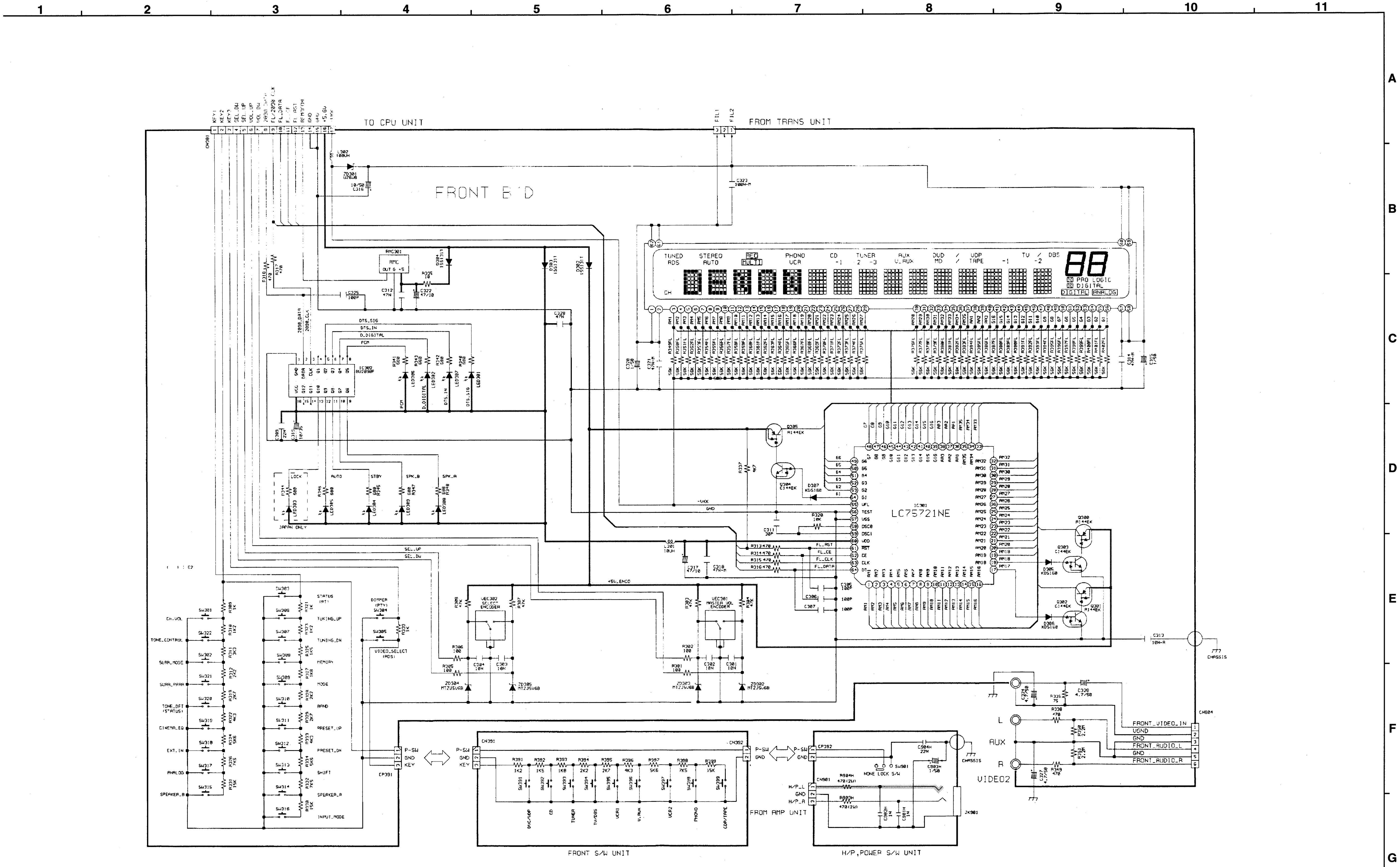
## WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

# SCHEMATIC DIAGRAMS (6/8)

VIDEO UNIT
S-VIDEO UNIT
FRONT CNT UNIT
OPTICAL UNIT

## SCHEMATIC DIAGRAMS (7/8)


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
TO CPU UNIT
FROM TRANS UNIT
FRONT B'D
TUNED RDS
STEREO AUTO
REC MULTI
PHONO VCR
CD -1
TUNER 2 -3
AUX V.AUX
DVD MD
VDP TAPE -1
TV -2
DBS
PRO LOGIC
DIGITAL
DIGITAL ANALOG
IC301
LC75721NE
IC302
BU2090F
RMC301
DTS_SIG
DTS_IN
D_DIGITAL
PCM
LOCK
AUTO
STBY
SPK_B
SPK_A
JAPAN ONLY
CH.VOL
TONE.CONTROL
SURR.MODE
SURR.PARA
TONE.DEF (STATUS)
CINEMA.EQ
EXT.IN
ANALOG
SPEAKER_B
STATUS (RT)
TUNING_UP
TUNING_DN
MEMORY
MODE
BAND
PRESET_UP
PRESET_DN
SHIFT
SPEAKER_A
INPUT_MODE
DIMMER (PTY)
VIDEO_SELECT (RDS)
SELECT ENCODER
MASTER VOL ENCODER
+5V_ENCO
SEL_UP
SEL_DW
FL_RST
FL_CE
FL_CLK
FL_DATA
P-SW
GND
KEY
CN391
CP391
CN392
CP392
DVD/VDP
CD
TUNER
TV/DBS
VCR1
V.AUX
VCR2
PHONO
CDR/TAPE
NONE LOCK S/W
CHASSIS
H/P_L
GND
H/P_R
FROM AMP UNIT
JK901
L
AUX
R
VIDEO2
FRONT_VIDEO_IN
VGND
GND
FRONT_AUDIO_L
GND
FRONT_AUDIO_R
CN604
FRONT S/W UNIT
H/P,POWER S/W UNIT

H

——— + B LINE
▨ SIGNAL LINE

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

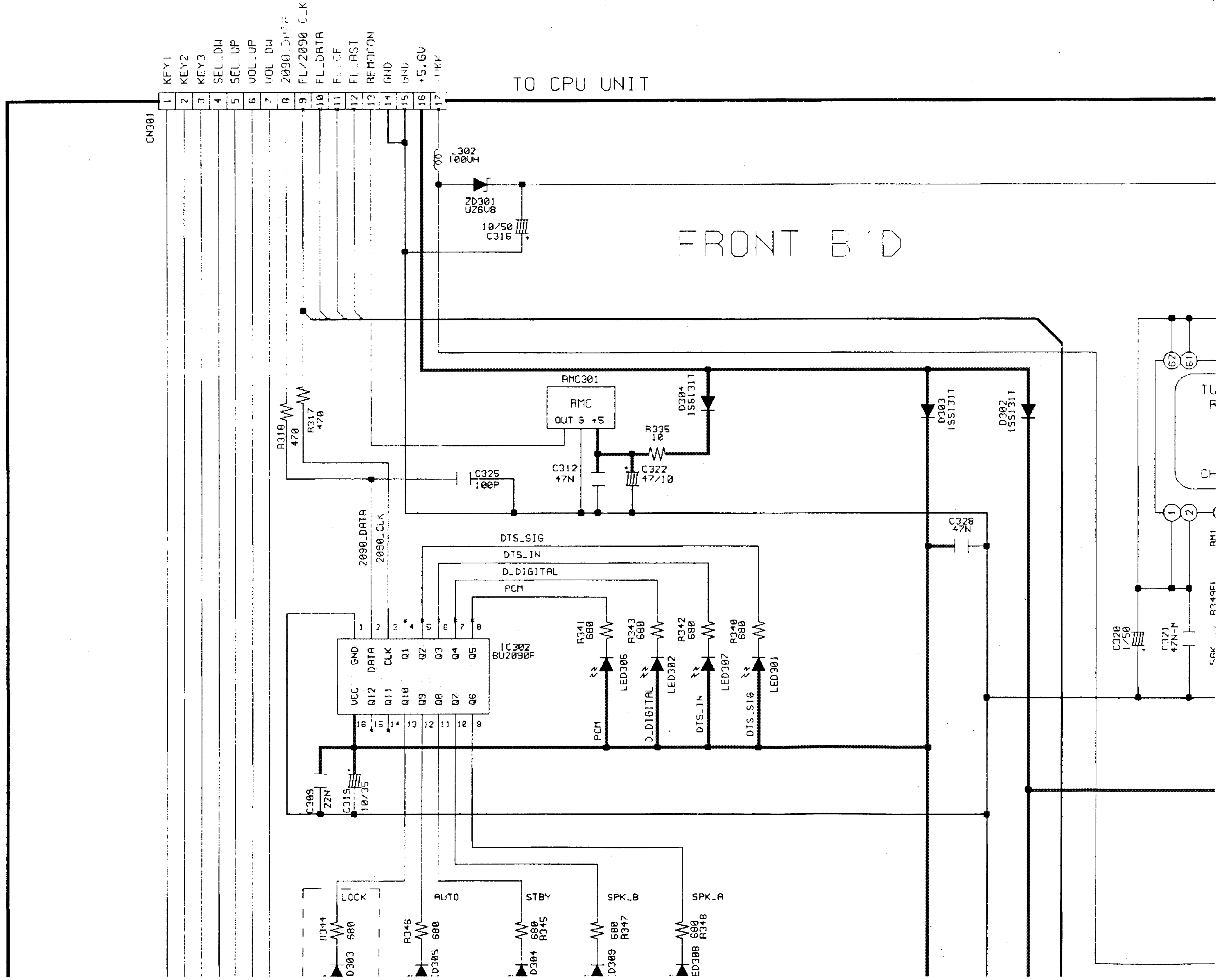
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

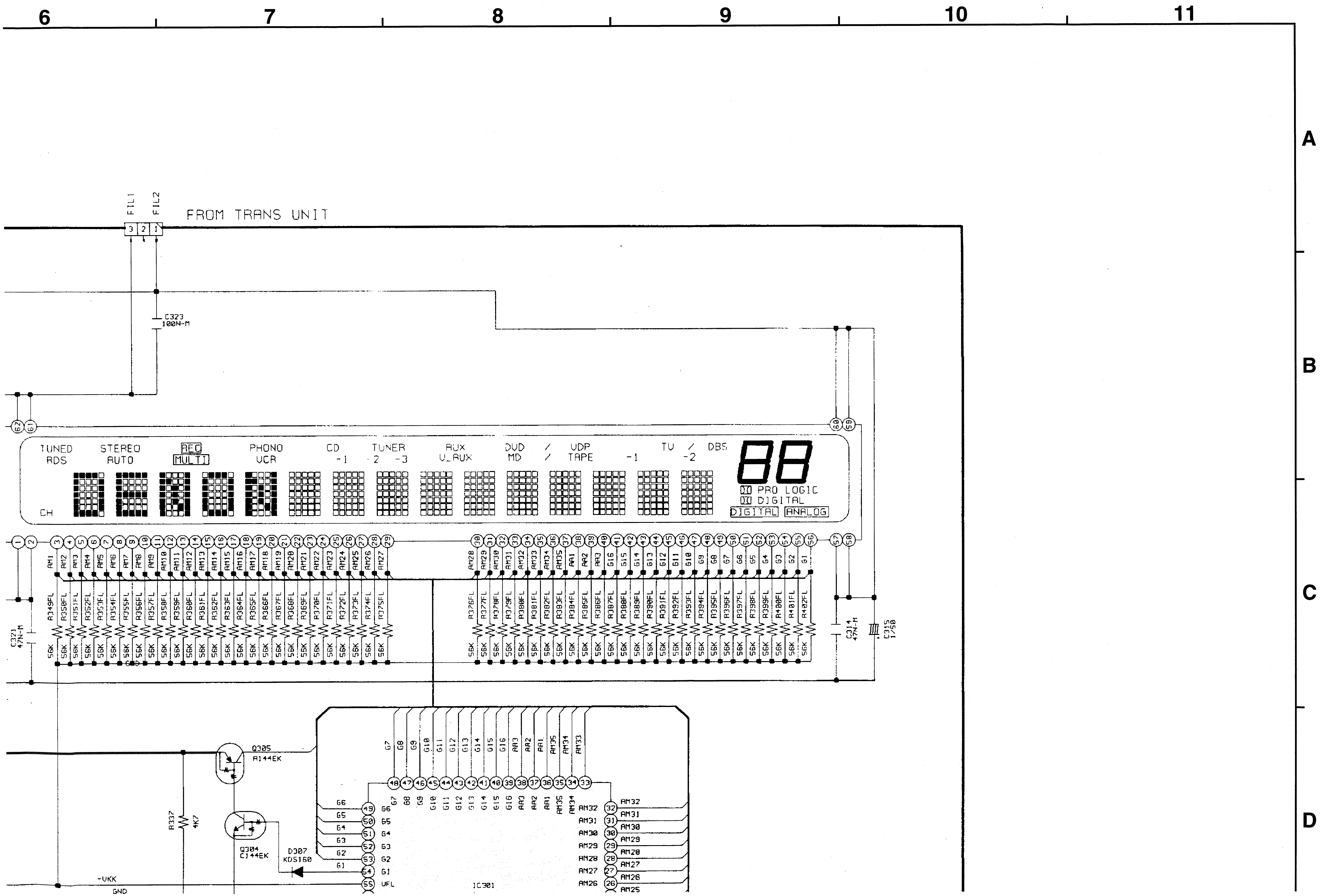
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

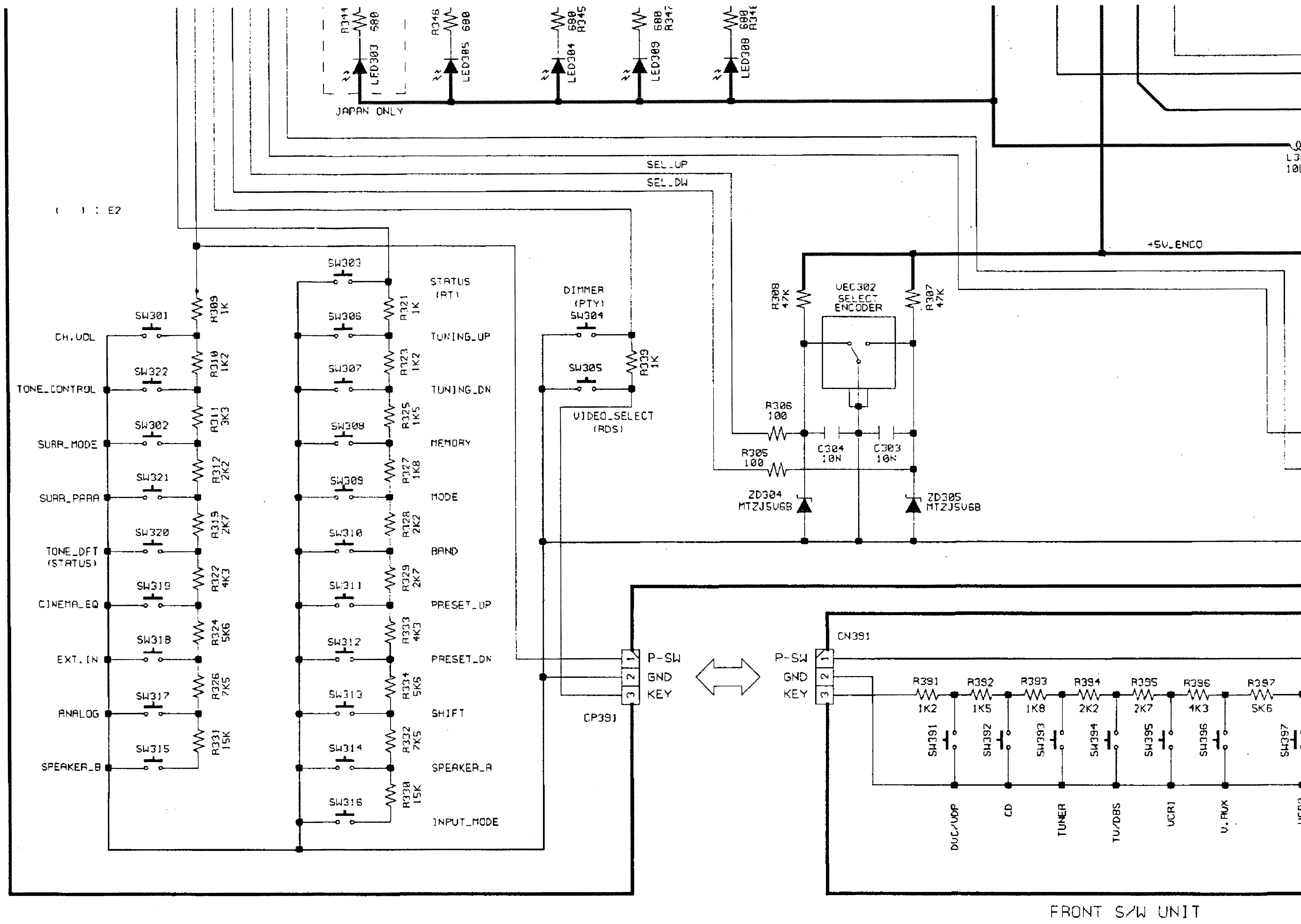
SCHEMATIC DIAGRAMS (7/8)
FRONT UNIT
TACT S/W UNIT
HEAD PHONE UNIT

# SCHEMATIC DIAGRAMS (7/8)

1 2 3 4 5 6

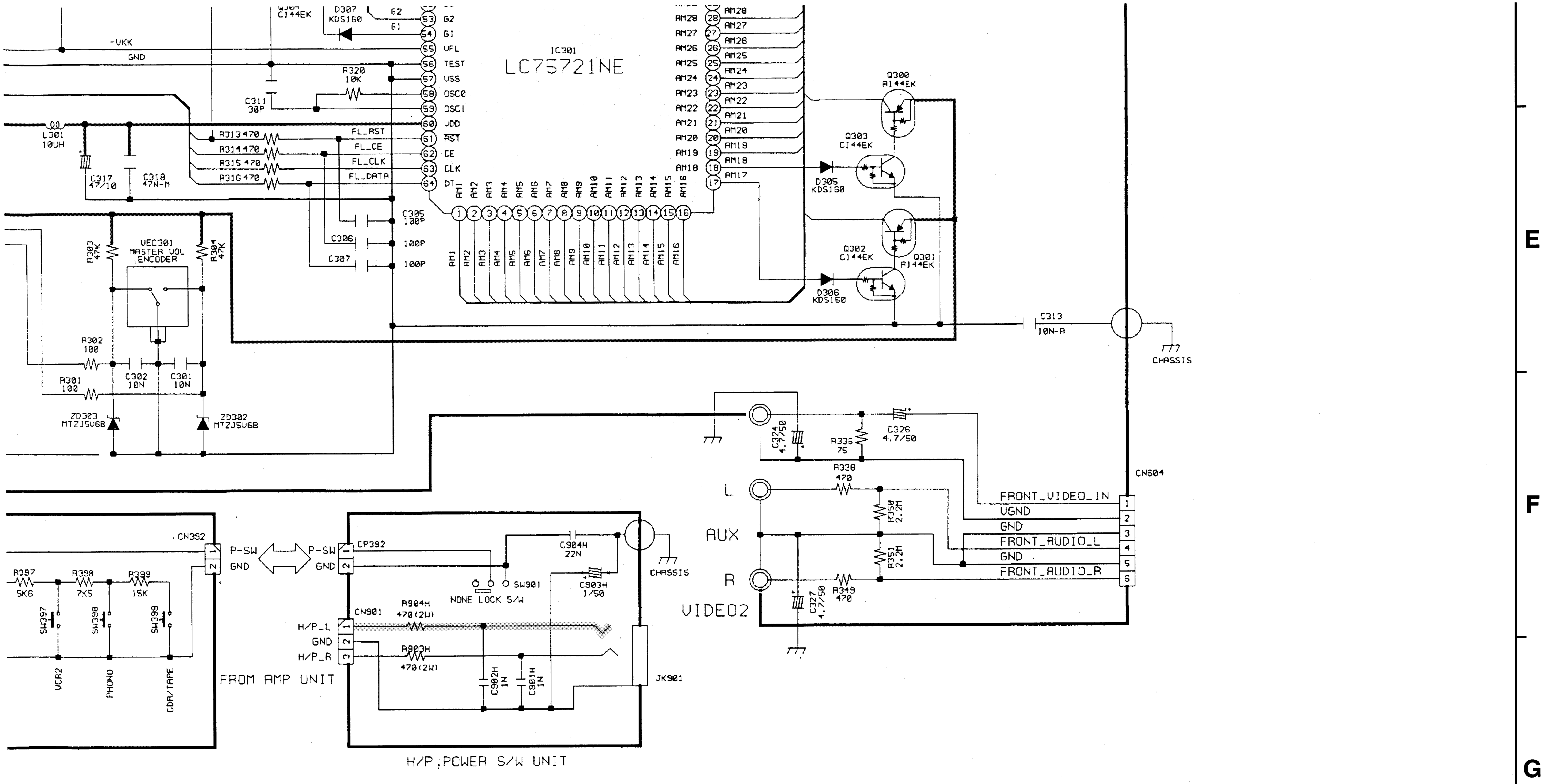

TO CPU UNIT
FRONT B'D
CN301
KEY1
KEY2
KEY3
SEL_DW
SEL_UP
VOL_UP
VOL_DW
2090_DATA
FL/2090_CLK
FL_DATA
FL_CF
FL_RST
REMOCON
GND
GND
+5.6V
UKK
L302 100UH
ZD301 UZ6V8
10/50 C316
RMC301
RMC
OUT G +5
D304 1SS131T
R335 10
C312 47N
C322 47/10
C325 100P
R318 470
R317 470
2090_DATA
2090_CLK
DTS_SIG
DTS_IN
D_DIGITAL
PCM
IC302 BU2090F
GND DATA CLK Q1 Q2 Q3 Q4 Q5
VCC Q12 Q11 Q10 Q9 Q8 Q7 Q6
R341 680
R343 680
R342 680
R340 680
LED306
LED302
LED307
LED301
PCM
D_DIGITAL
DTS_IN
DTS_SIG
C309 22N
C315 10/35
D303 1SS131T
D302 1SS131T
C328 47N
C320 1/50
C321 47N-M
LOCK
AUTO
STBY
SPK_B
SPK_A
R344 680
R346 680
680 R345
680 R347
680 R348
LED303
LED305
LED304
LED309
LED308


6
7
8
9
10
11
A
B
C
D
FIL1
FIL2
3 2 1
FROM TRANS UNIT
C323
100N-M
TUNED
RDS
STEREO
AUTO
REC
MULTI
PHONO
VCR
CD
-1
TUNER
-2 -3
AUX
V_AUX
DVD
MD
/
/
VDP
TAPE
-1
TV
/
DBS
-2
PRO LOGIC
DIGITAL
DIGITAL
ANALOG
CH
AM1 AM2 AM3 AM4 AM5 AM6 AM7 AM8 AM9 AM10 AM11 AM12 AM13 AM14 AM15 AM16 AM17 AM18 AM19 AM20 AM21 AM22 AM23 AM24 AM25 AM26 AM27
AM28 AM29 AM30 AM31 AM32 AM33 AM34 AM35 AA1 AA2 AA3 G16 G15 G14 G13 G12 G11 G10 G9 G8 G7 G6 G5 G4 G3 G2 G1
R349FL R350FL R351FL R352FL R353FL R354FL R355FL R356FL R357FL R358FL R359FL R360FL R361FL R362FL R363FL R364FL R365FL R366FL R367FL R368FL R369FL R370FL R371FL R372FL R373FL R374FL R375FL
R376FL R377FL R378FL R379FL R380FL R381FL R382FL R383FL R384FL R385FL R386FL R387FL R388FL R389FL R390FL R391FL R392FL R393FL R394FL R395FL R396FL R397FL R398FL R399FL R400FL R401FL R402FL
56K
C321
47N-M
C314
47N-M
C315
1/50
GND
Q305
A144EK
Q304
CJ44EK
R337
4K7
D307
KDS160
-VKK
GND
G7 G8 G9 G10 G11 G12 G13 G14 G15 G16 AA3 AA2 AA1 AM35 AM34 AM33
G6 G5 G4 G3 G2 G1 UFL
AM32 AM31 AM30 AM29 AM28 AM27 AM26 AM25
IC301


R314 680
R346 680
680 R345
680 R347
680 R348
LED303
LED305
LED304
LED309
LED308
JAPAN ONLY
SEL_UP
SEL_DW
( ) : E2
+5V_ENCO
L3
10
SW303
STATUS (RT)
SW301
R309 1K
CH.VOL
SW322
R310 1K2
TONE_CONTROL
SW302
R311 3K3
SURR_MODE
SW321
R312 2K2
SURR_PARA
SW320
R319 2K7
TONE_DFT (STATUS)
SW319
R322 4K3
CINEMA_EQ
SW318
R324 5K6
EXT.IN
SW317
R326 7K5
ANALOG
SW315
R331 15K
SPEAKER_B
SW306
R321 1K
TUNING_UP
SW307
R323 1K2
TUNING_DN
SW308
R325 1K5
MEMORY
SW309
R327 1K8
MODE
SW310
R328 2K2
BAND
SW311
R329 2K7
PRESET_UP
SW312
R333 4K3
PRESET_DN
SW313
R334 5K6
SHIFT
SW314
R332 7K5
SPEAKER_A
SW316
R330 15K
INPUT_MODE
DIMMER (PTY) SW304
SW305
R339 1K
VIDEO_SELECT (RDS)
R308 47K
UEC302 SELECT ENCODER
R307 47K
R306 100
R305 100
C304 10N
C303 10N
ZD304 MTZJ5V6B
ZD305 MTZJ5V6B
P-SW
GND
KEY
CP391
CN391
R391 1K2
R392 1K5
R393 1K8
R394 2K2
R395 2K7
R396 4K3
R397 5K6
SW391
SW392
SW393
SW394
SW395
SW396
SW397
DVD/VDP
CD
TUNER
TV/DBS
VCR1
V.AUX
FRONT S/W UNIT

## NOTICE

ALL RESISTANCE VAL
ALL CAPACITANCE VA
EACH VOLTAGE AND C
CONDITION.
CIRCUIT AND PARTS /
NOTICE.


IC301
LC75721NE
D307
KDS160
-VKK
GND
R320
10K
C311
30P
L301
10UH
C317
47/10
C318
47N-M
R313 470
R314 470
R315 470
R316 470
FL_RST
FL_CE
FL_CLK
FL_DATA
G2
G1
VFL
TEST
VSS
OSC0
OSC1
VDD
RST
CE
CLK
DI
C305
100P
C306
100P
C307
100P
R303
47K
R304
47K
VEC301
MASTER VOL
ENCODER
R302
100
R301
100
C302
10N
C301
10N
ZD303
MTZJ5V6B
ZD302
MTZJ5V6B
Q300
A144EK
Q303
C144EK
D305
KDS160
Q302
C144EK
Q301
A144EK
D306
KDS160
C313
10N-A
CHASSIS
C324
4.7/50
R336
75
C326
4.7/50
R338
470
L
AUX
R
VIDEO2
R350
2.2M
R351
2.2M
R349
470
C327
4.7/50
CN604
FRONT_VIDEO_IN
VGND
GND
FRONT_AUDIO_L
GND
FRONT_AUDIO_R
CN392
P-SW
GND
R397
5K6
R398
7K5
R399
15K
SW397
SW398
SW399
VCR2
PHONO
CDR/TAPE
FROM AMP UNIT
CP392
C904H
22N
SW901
NONE LOCK S/W
C903H
1/50
CN901
H/P_L
H/P_R
R904H
470(2W)
R903H
470(2W)
C902H
1N
C901H
1N
JK901
H/P,POWER S/W UNIT
E
F
G

+ B LINE

SIGNAL LINE

### WARNING:

Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

### CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

### WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

CE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
NCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

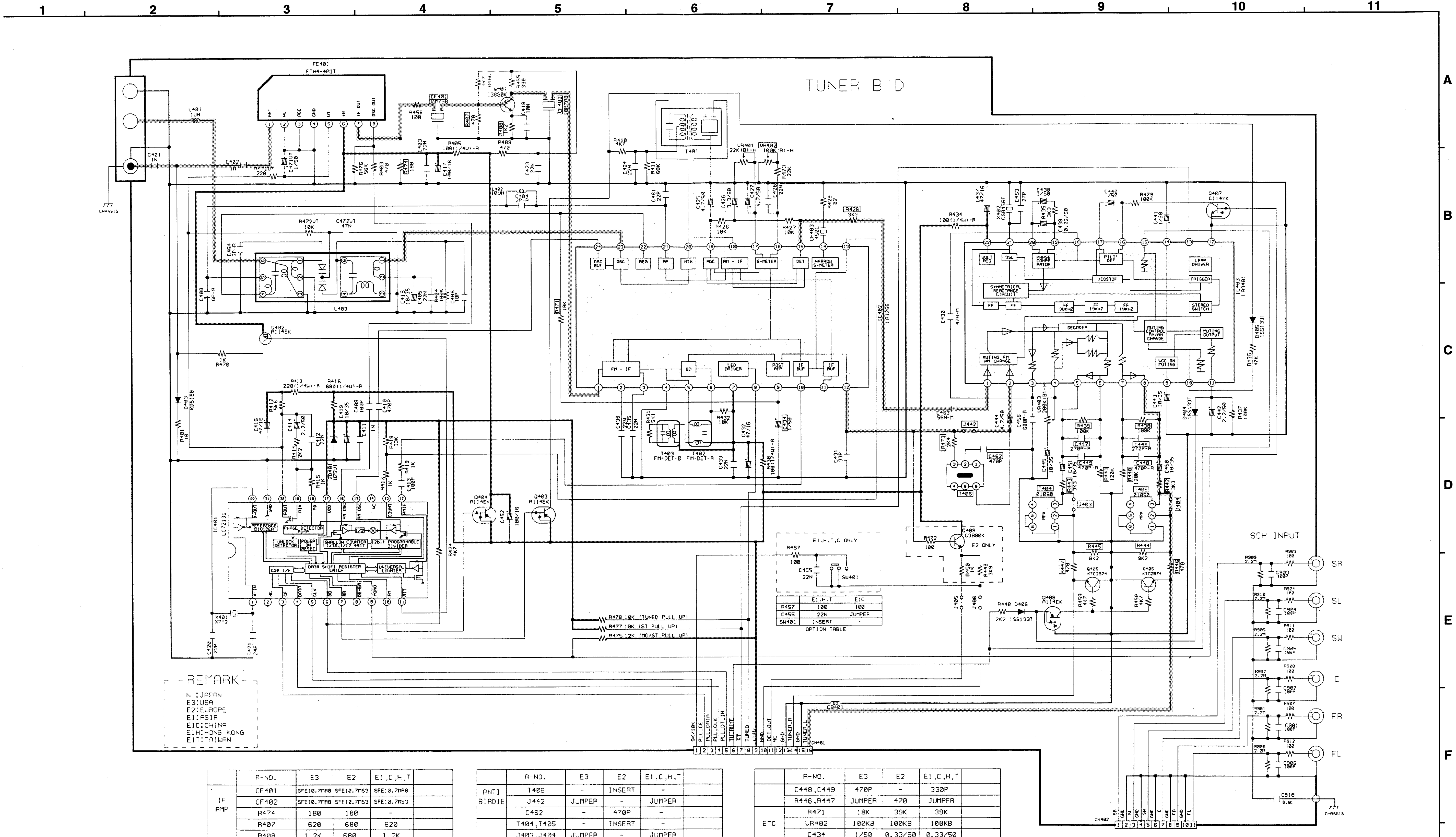
PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

## SCHEMATIC DIAGRAMS (7/8)

FRONT UNIT
TACT S/W UNIT
HEAD PHONE UNIT

H

## SCHEMATIC DIAGRAMS (8/8)


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
TUNER B'D
FE401
FTH4-401I
L401
1UH
C401
1N
C402
1N
R471UT
220
CHASSIS
L403
Q402
A114EK
R470
1K
D403
KDS180
R413
220(1/4W)-A
R416
680(1/4W)-A
IC401
LC72131
ZD401
UZ5V1
Q404
A114EK
Q403
A114EK
X401
X7M2
C420
22P
C421
24P
REFERENCE DIVIDER
PHASE DETECTOR
CHARGE PUMP
UNLOCK DETECTOR
POWER ON RESET
SWALLOW COUNTER 1/16,1/17 4BIT
12BIT PROGRAMMABLE DIVIDER
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
T401
UR401
22K(B)-H
UR402
100K(B)-H
IC402
LA1266
OSC BUF
OSC
REG
RF
MIX
AGC
AM-IF
S-METER
DET
NARROW S-METER
FM-IF
QD
LED DRIVER
POST AMP
IF BUF
T403
FM-DET-B
T402
FM-DET-A
R478 10K (TUNED PULL UP)
R477 10K (ST PULL UP)
R475 12K (MO/ST PULL UP)
E1,H,T,C ONLY
R457
100
C455
22N
SW401
Q409
C3880K
E2 ONLY
VOLT REG
PHASE COMPARATOR
PILOT DET
VCO STOP
LAMP DRIVER
TRIGGER
SYMMETRICAL RESISTANCE CIRCUIT
STEREO SWITCH
DECODER
MUTING CONTROL FM/AM CHANGE
MUTING OUTPUT
MUTING FM AM CHANGE
VCC ON MUTING
Q407
C114YK
T404
T405
T406
Q405
KTC2874
Q406
KTC2874
Q408
A114EK
D406
1SS133
5CH INPUT
SR
SL
SW
C
FR
FL
CHASSIS
9K/10K
PLL_CE
PLL_DATA
PLL_CLK
PLL_DT_IN
TU_MUTE
ST
TUNED
+14V
GND
DET_OUT
NC
GND
TUNER_R
GND
TUNER_L
CN481
CN402

-REMARK-

N :JAPAN
E3:USA
E2:EUROPE
E1:ASIA
E1C:CHINA
E1H:HONG KONG
E1T:TAIWAN

| | E1,H,T | E1C |
|---|---|---|
| R457 | 100 | 100 |
| C455 | 22N | JUMPER |
| SW401 | INSERT | - |

OPTION TABLE

| | R-NO. | E3 | E2 | E1,C,H,T | |
|---|---|---|---|---|---|
| IF AMP | CF401 | SFE10.7MA8 | SFE10.7MS3 | SFE10.7MA8 | |
| | CF402 | SFE10.7MA8 | SFE10.7MS3 | SFE10.7MS3 | |
| | R474 | 180 | 180 | - | |
| | R407 | 620 | 680 | 620 | |
| | R408 | 1.2K | 680 | 1.2K | |
| OUTPUT LEVEL | R428 | 3.3K | 10K | 6.8K | |
| | R473 | JUMPER | 2.4K | JUMPER | |
| | R444,R445 | 8.2K | 3.3K | 8.2K | |
| | R442,R443 | 3.3K | 2.2K | 3.3K | |

| | R-NO. | E3 | E2 | E1,C,H,T | |
|---|---|---|---|---|---|
| ANTI BIRDIE | T406 | - | INSERT | - | |
| | J442 | JUMPER | - | JUMPER | |
| | C462 | - | 470P | - | |
| DE EMPHASIS | T404,T405 | - | INSERT | - | |
| | J403,J404 | JUMPER | - | JUMPER | |
| | R440,R441 | 120K | 220K | 120K | |
| | R438,R439 | 100K | 150K | 100K | |
| | C446,C447 | 270P | 330P | 180P | |
| RDS | J405,406 | - | INSERT | - | |

| | R-NO. | E3 | E2 | E1,C,H,T | |
|---|---|---|---|---|---|
| | C448,C449 | 470P | - | 330P | |
| | R446,R447 | JUMPER | 470 | JUMPER | |
| ETC | R471 | 18K | 39K | 39K | |
| | VR402 | 100KB | 100KB | 100KB | |
| | C434 | 1/50 | 0.33/50 | 0.33/50 | |
| RDS | R449 | - | 3.9K | - | |
| | R450 | - | 1K | - | |
| | R472 | - | 100 | - | |
| | Q409 | - | C3880K | - | |

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

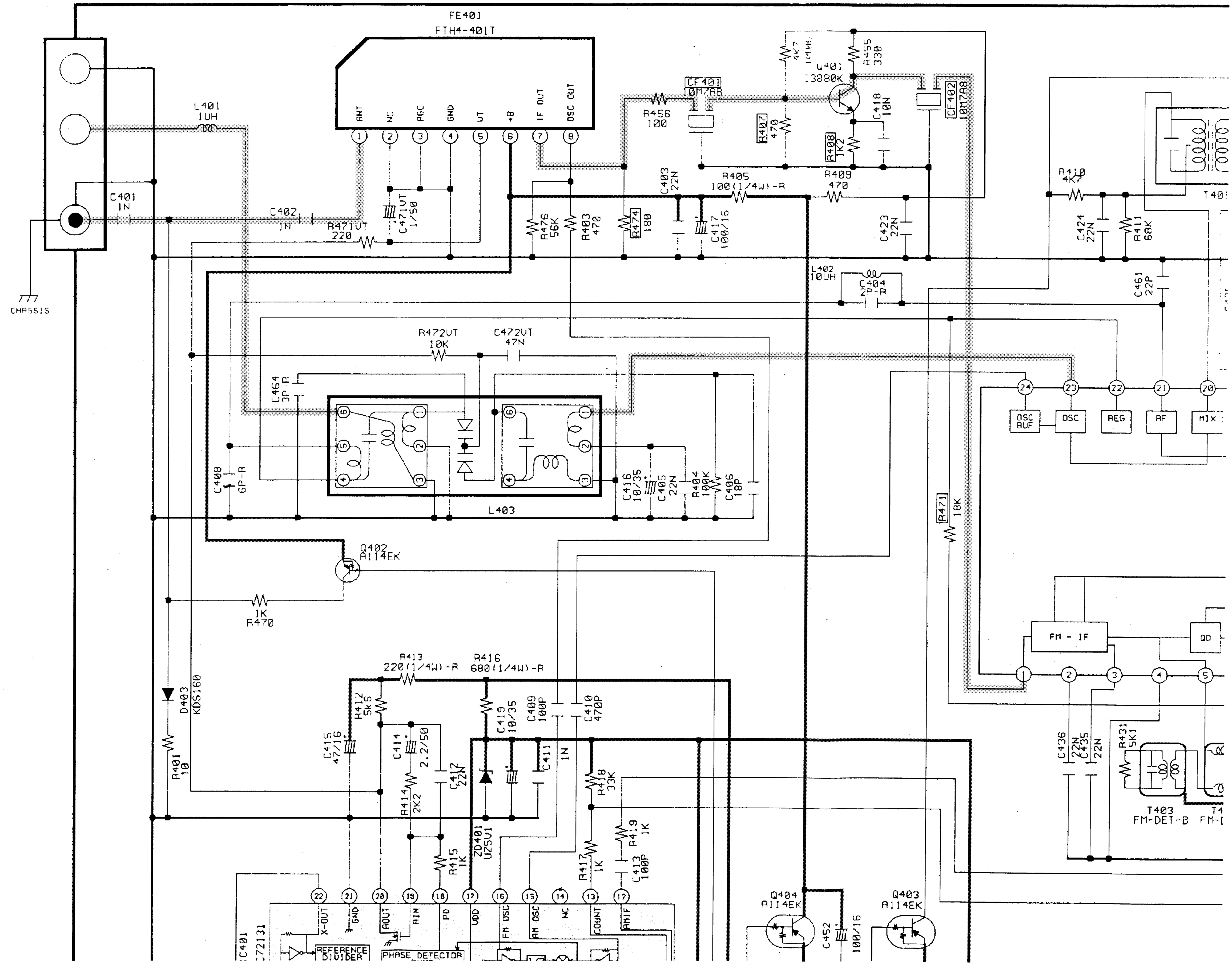
NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

━━━ + B LINE
▨▨▨ SIGNAL LINE

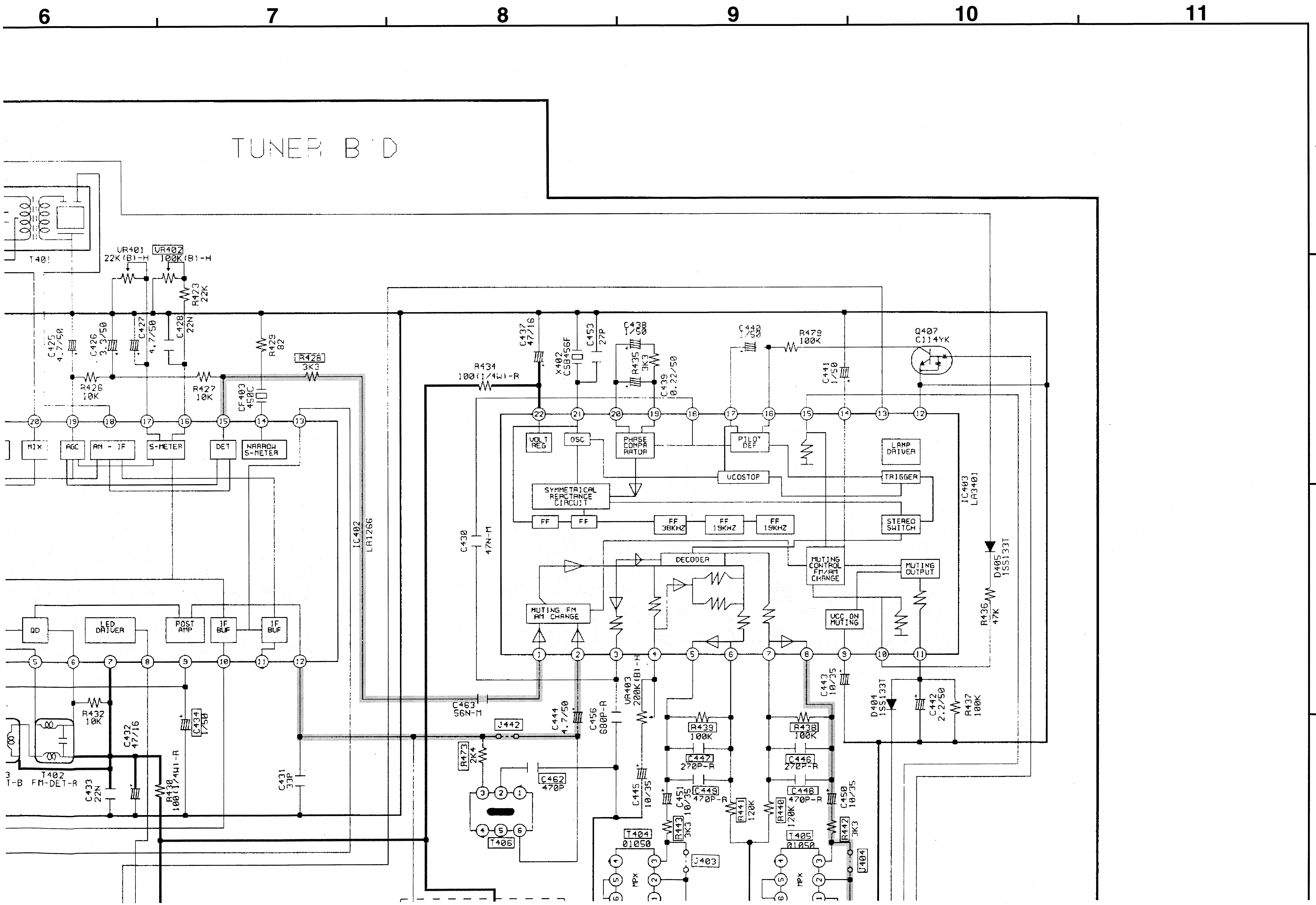
SCHEMATIC DIAGRAMS (8/8)
TUNER UNIT

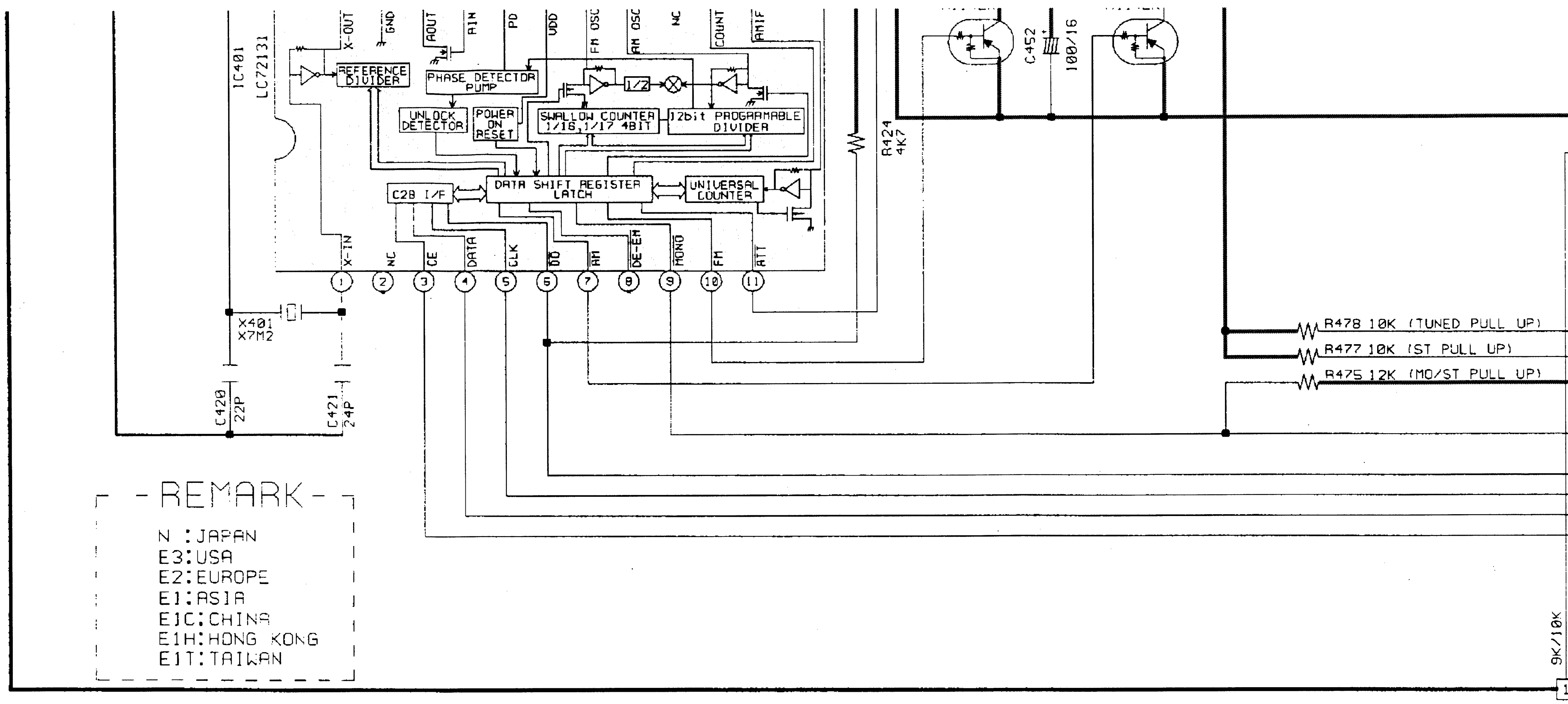
# SCHEMATIC DIAGRAMS (8/8)

1 2 3 4 5 6



CHASSIS
L401 1UH
C401 1N
C402 1N
FE401 FTH4-401T
ANT
NC
AGC
GND
VT
+B
IF OUT
OSC OUT
R471UT 220
C471UT 1/50
R476 56K
R403 470
R474 180
R456 100
CF401 10M7A8
C403 22N
C417 100/16
R405 100(1/4W)-R
R407 470
R408 1K2
Q401 J3880K
R455 330
C418 10N
R409 470
C423 22N
CF402 10M7A8
L402 10UH
C404 2P-R
R410 4K7
C424 22N
R411 68K
C461 22P
T401
R472UT 10K
C472UT 47N
C464 3P-R
C408 6P-R
L403
C416 10/35
C405 22N
R404 100K
C406 18P
OSC BUF
OSC
REG
RF
MIX
R471 18K
Q402 A114EK
R470 1K
D403 KDS160
R401 10
R413 220(1/4W)-R
R416 680(1/4W)-R
R412 5K6
C415 47/16
C414 2.2/50
R414 2K2
C412 22N
C419 10/35
C409 100P
C410 470P
C411 1N
R418 33K
R419 1K
R415 1K
ZD401 UZ5V1
R417 1K
C413 100P
X-OUT
GND
AOUT
AIN
PD
VDD
FM OSC
AM OSC
NC
COUNT
AMIF
REFERENCE DIVIDER
PHASE DETECTOR
C401
C72131
Q404 A114EK
C452 100/16
Q403 A114EK
FM - IF
QD
C436 22N
C435 22N
R431 5K1
T403 FM-DET-B


6
7
8
9
10
11
A
B
C
D
TUNER B'D
T401
VR401 22K(B)-H
VR402 100K(B)-H
R423 22K
C425 4.7/50
C426 3.3/50
C427 4.7/50
C428 22N
R429 82
R428 3K3
R426 10K
R427 10K
CF403 450C
MIX
AGC
AM - IF
S-METER
DET
NARROW S-METER
IC402 LA1266
QD
LED DRIVER
POST AMP
IF BUF
IF BUF
R432 10K
C432 47/16
C434 1/50
T402 FM-DET-A
C433 22N
R430 100(1/4W)-R
C431 33P
C463 56N-M
J442
R473 2K4
C462 470P
T406
C444 4.7/50
C456 680P-R
VR403 200K(B)-H
C445 10/35
R434 100(1/4W)-R
C430 47N-M
C437 47/16
X402 CSB456F
C453 27P
C438 1/50
R435 3K3
C439 0.22/50
C440 1/50
R479 100K
C441 1/50
Q407 C1114YK
VOLT REG
OSC
PHASE COMPA RATOR
PILOT DET
LAMP DRIVER
VCOSTOP
TRIGGER
SYMMETRICAL REACTANCE CIRCUIT
FF
FF
FF 38KHZ
FF 19KHZ
FF 19KHZ
STEREO SWITCH
IC403 LA3401
DECODER
MUTING CONTROL FM/AM CHANGE
MUTING OUTPUT
MUTING FM AM CHANGE
VCC ON MUTING
D405 1SS133T
R436 47K
C443 10/35
D404 1SS133T
C442 2.2/50
R437 100K
R439 100K
R438 100K
C447 270P-R
C446 270P-R
C449 470P-R
C448 470P-R
R441 120K
R440 120K
C451 10/35
C450 10/35
R443 3K3
R442 3K3
T404 01050
T405 01050
J403
J404
MPX
MPX


IC401
LC72131
X-OUT
GND
AOUT
AIN
PD
VDD
FM OSC
AM OSC
NC
COUNT
AMIF
REFERENCE DIVIDER
PHASE DETECTOR PUMP
UNLOCK DETECTOR
POWER ON RESET
SWALLOW COUNTER 1/16,1/17 4BIT
12bit PROGRAMABLE DIVIDER
1/2
C2B I/F
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
X-IN
NC
CE
DATA
CLK
DO
AM
DE-EM
MONO
FM
ATT
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
X401
X7M2
C420
22P
C421
24P
R424
4K7
C452
100/16
R478 10K (TUNED PULL UP)
R477 10K (ST PULL UP)
R475 12K (MO/ST PULL UP)
9K/10K

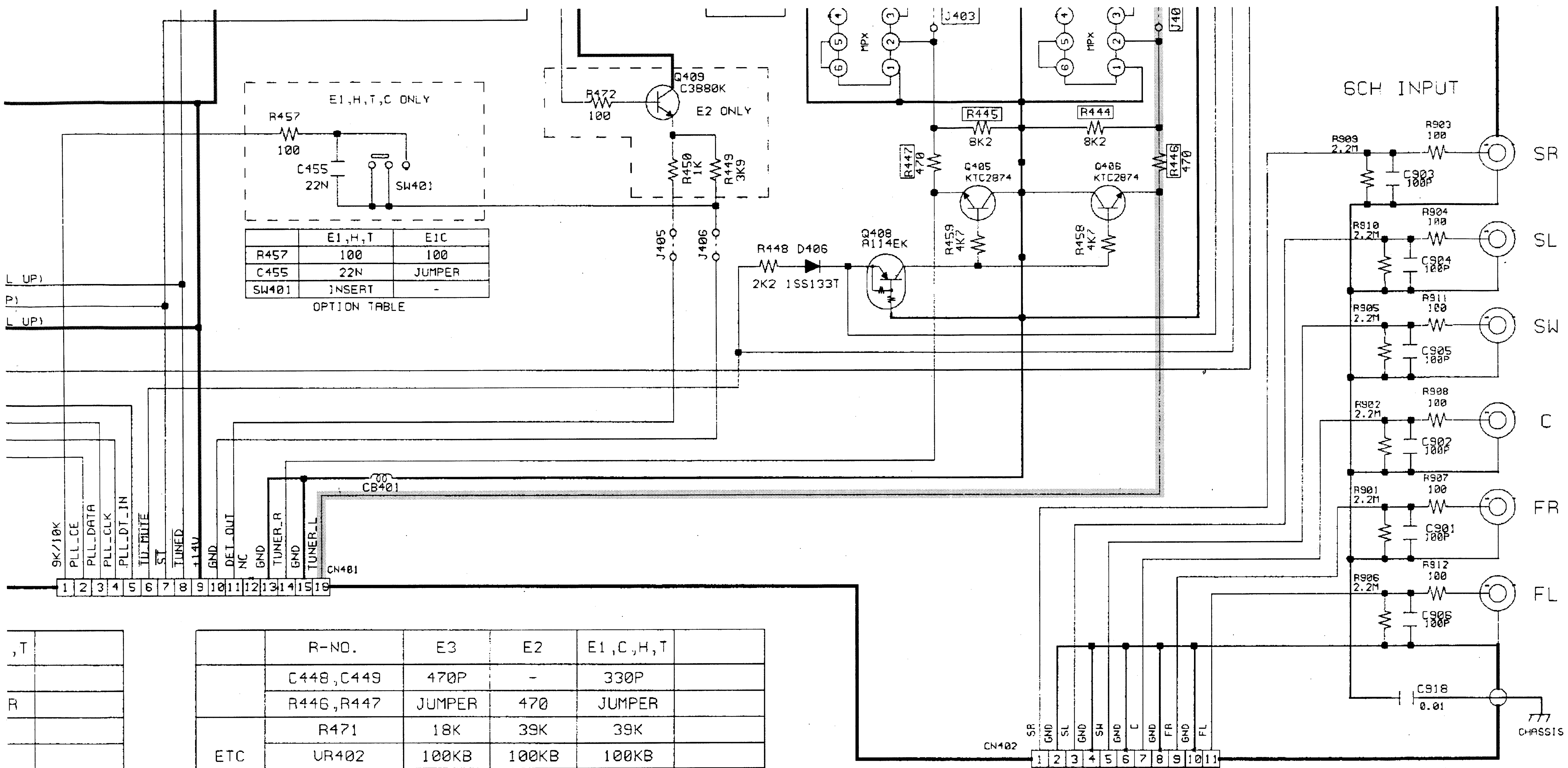
-REMARK-

N :JAPAN
E3:USA
E2:EUROPE
E1:ASIA
E1C:CHINA
E1H:HONG KONG
E1T:TAIWAN

| | R-NO. | E3 | E2 | E1,C,H,T | |
|---|---|---|---|---|---|
| IF AMP | CF401 | SFE10.7MA8 | SFE10.7MS3 | SFE10.7MA8 | |
| | CF402 | SFE10.7MA8 | SFE10.7MS3 | SFE10.7MS3 | |
| | R474 | 180 | 180 | - | |
| | R407 | 620 | 680 | 620 | |
| | R408 | 1.2K | 680 | 1.2K | |
| OUTPUT LEVEL | R428 | 3.3K | 10K | 6.8K | |
| | R473 | JUMPER | 2.4K | JUMPER | |
| | R444,R445 | 8.2K | 3.3K | 8.2K | |
| | R442,R443 | 3.3K | 2.2K | 3.3K | |

| | R-NO. | E3 | E2 | E1,C,H,T |
|---|---|---|---|---|
| ANTI BIRDIE | T406 | - | INSERT | - |
| | J442 | JUMPER | - | JUMPER |
| | C462 | - | 470P | - |
| DE EMPHASIS | T404,T405 | - | INSERT | - |
| | J403,J404 | JUMPER | - | JUMPER |
| | R440,R441 | 120K | 220K | 120K |
| | R438,R439 | 100K | 150K | 100K |
| | C446,C447 | 270P | 330P | 180P |
| RDS | J405,406 | - | INSERT | - |

NOTICE
ALL RESISTANCE VAL
ALL CAPACITANCE VA
EACH VOLTAGE AND C
CONDITION.
CIRCUIT AND PARTS A
NOTICE.


E1,H,T,C ONLY
R457
100
C455
22N
SW401
Q409
C3880K
R472
100
E2 ONLY
R450
1K
R449
3K9
J405
J406
J403
MPX
R445
8K2
R444
8K2
R447
470
R446
470
Q405
KTC2874
Q406
KTC2874
R459
4K7
R458
4K7
Q408
A114EK
R448
2K2
D406
1SS133T
CB401
L_UP)
P)
L_UP)
9K/10K
PLL_CE
PLL_DATA
PLL_CLK
PLL_DT_IN
TU_MUTE
ST
TUNED
+14V
GND
DET_OUT
NC
GND
TUNER_R
GND
TUNER_L
CN401
6CH INPUT
R909
2.2M
R903
100
C903
100P
SR
R910
2.2M
R904
100
C904
100P
SL
R905
2.2M
R911
100
C905
100P
SW
R902
2.2M
R908
100
C902
100P
C
R901
2.2M
R907
100
C901
100P
FR
R906
2.2M
R912
100
C906
100P
FL
C918
0.01
CHASSIS
CN402
SR
GND
SL
GND
SW
GND
C
GND
FR
GND
FL
E
F
G
H

| | E1,H,T | E1C |
|---|---|---|
| R457 | 100 | 100 |
| C455 | 22N | JUMPER |
| SW401 | INSERT | - |

OPTION TABLE

| ,T | |
|---|---|
| | |
| R | |
| | |
| | |
| R | |
| | |
| | |
| | |
| | |

| | R-NO. | E3 | E2 | E1,C,H,T | |
|---|---|---|---|---|---|
| | C448,C449 | 470P | - | 330P | |
| | R446,R447 | JUMPER | 470 | JUMPER | |
| ETC | R471 | 18K | 39K | 39K | |
| | VR402 | 100KB | 100KB | 100KB | |
| | C434 | 1/50 | 0.33/50 | 0.33/50 | |
| RDS | R449 | - | 3.9K | - | |
| | R450 | - | 1K | - | |
| | R472 | - | 100 | - | |
| | Q409 | - | C3880K | - | |

CE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
NCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
E AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT

ARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR

## WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

## CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

## WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

—— +B LINE

▨ SIGNAL LINE

# SCHEMATIC DIAGRAMS (8/8)
## TUNER UNIT